

Challenge

THE MAGAZINE OF ECONOMIC AFFAIRS

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Vol. 8, No. 2
NOVEMBER, 1959

Published by Institute of Economic Affairs, New York University

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from the editor

a personal note

■ THE END of the steel tieup after months of negotiation was bound to be inelegant, to say the least. One wonders now if it was not the intent of one or both sides to force the dispute out of the ken of collective bargaining. If this was not the intent of the negotiators from the beginning, it certainly must have occurred to them in the later stages of the impasse.

Perhaps some of the readers of CHALLENGE and of the other publications of this Institute will recall that six months ago we went out on a limb and predicted that there would be no steel strike. We have been reminded of this constantly ever since. I think the time has come to say that the error in judgment was not so much ours as the parties' to the steel dispute. We had thought that labor and management would spot the handwriting on the wall; that they would realize the day of finding an easy escape hatch via higher prices was over; that they would be realistic enough to arrive at an interim quick settlement while setting up a joint study of the basic issues in steel for future reference.

They did none of these things, and it took them three months to find out that their traditional formula for settlement could no longer fit the requirements for 1959. Thus the federal intervention, which was precisely the kind of blow to collective bargaining that the President had sought to avoid. Then government

had to analyze the issues and thereby set the limits of acceptable terms. If free enterprise is ever buried, it won't be because of an avalanche of Russian successes. Lapses in labor-management statesmanship at home will turn that trick.

What choices do we have? We have several. We can continue to avoid a study of the *issues* and concentrate on the *terms* of a settlement. If the fact-finders take that line of approach, then there is a good chance that labor and management can be "shamed" into signing an agreement. Such an agreement would result in steady price increases, or, barring that, it would leave both sides dissatisfied. Next year, or the year after, we would be confronted by the same mess.

If the fact-finders tackle the basic issues instead—studying such things as wages and profits, productivity and investment—then we would be getting at the heart of the real dispute between labor and management. But by what authority can the government impose its conclusions on such vital issues? It does not have the legal power to do so, and it never has had nor should have the moral sanction to seek such power. In effect, before both sides could agree on a hearty acceptance of the government's blueprint, they would first have to admit that government understands the problems of the industry and of the union better than management and labor.

These are the choices confronting our industrial democracy today. There is one other: that through some miracle of foresight the issues will be studied on a joint basis by labor and management without resort to emergency interference from an outside political authority.—H. B.

letters TO THE EDITOR

Challenge at the ballpark?

• Why don't you carry a regular page devoted to stock market advice? Not tips, but good, solid analysis of trends in the market. You certainly have some noted authors—why not ask a noted analyst to do a monthly column for you? I bet it would make CHALLENGE sell like hot dogs at a ballpark!

J. C. ZIMMERMAN

Los Angeles, Calif.

Giving stock market advice is against editorial policy—plus the fact that “hot dogs” of every grade are already being gobbled up by the fans.—Ed.

Second helping

• After two days of a rainy vacation I began re-reading old magazines and came across the index in the July CHALLENGE. As a result, I read several articles for a second time and enjoyed them just as much. I still liked the February issue best and wish that you would publish issues devoted to a single subject more often.

A. M. MORRIS

Levittown, L.I.

Handy reference

• I wonder if it would be possible

to obtain several back issues of CHALLENGE. I would like to complete my collection of copies to include all those covered in the index so that I can send them to my sister. After reading the index she felt that CHALLENGE would be useful as reference material in teaching high school current history classes.

MRS. GEORGE RANKER

Cincinnati, Ohio

Strange bedfellows

• Now that Niki the Charmer has left our shores, it seems to me a good time to reflect on the real reason for his visit here.

For some time, through the media of Pravda, Tass, Izvestia and his speeches, Khrushchev has vilified the “warmongering capitalists” whom he says run our government. While being wined and dined by these people during his stay here, however, he changed his tune.

He went back to Moscow with nothing but praise for these people and the President. He has now turned his venom on “certain irresponsible elements and politicians,” (union leaders and the Mayor of Los Angeles), who were disinclined to salaam in his presence.

And why not! The people he once blamed for all the poor relations between Washington and Moscow, but now praises, the industrialists, are the real reason for his coming here—not Berlin, not disarmament, not peace, but *trade*!

They can provide something he wants—*trade*. He can give them something they want—*markets*.

Nifty Niki hates capitalism; he won't be converted. But he'll live with it, so long as it serves his purpose.

The industrialists hate communism; they won't be converted either. But they'll live with it as long as it fills their pockets and buys goods from them—even if Niki the Charmer blows them and the rest of us off the face of the earth with the goods we sell him.

Remember Pearl Harbor!

ANGUISHED AMERICAN

Chicago, Ill.

Congratulations

• As a Pole who has just returned from a two-week trip to Warsaw, I must congratulate you for publishing Dr. Montias' excellent article on "The Polish Grand Experiment." The Polish economy is by no means out of the woods yet. Gomulka is finding that a "liberal" socialist economy is a contradiction in terms. The result has been inefficient socialism with not enough freedom to make capitalism work.

WLADISLAW DOBROWSKI

Detroit, Mich.

Disappointed

• I was very disappointed in Mr. Fleming's article on the New Deal and am surprised that a magazine like yours would publish such trash.

I say this as a Republican in good standing who disapproves of much of the New Deal. But to say, as Mr. Fleming does, that the New Deal contributed nothing of value is to damn most of President Eisenhower's dynamic and forward-looking program. I am afraid that, unlike our President, Mr. Fleming is a conservative *both* in his economic thinking and in his thinking on human problems.

ABEL ARONSON

New York, N.Y.

Important force

• The author of "Keeping Our Cities Solvent" [October, 1959] omits, it seems to me, one very important force which is pushing our cities toward insolvency: city governments tend more and more to knuckle under to the growing philosophy that government must be all things to all men. Because the federal government has taken it upon itself to provide everything from pills to pleasure, city governments feel they too must "get into the act." Once city governments get back to the business of being city governments, and not dolers-out at the horn of plenty, they should have fewer financial headaches.

JASPER H. SEXAUER

Asthabula, Ohio

Educators' approval

• The Economics Department here at Pomona College was introduced to your informative publication by myself, and, judging from their reaction, another subscription will be forthcoming.

ALLEN VAN HOUSE

Claremont, Calif.



Challenge Notes

Haunting questions at Elsinore; "industrial espionage"; the need for seconds; looking the pea problem square in the eye

■ AT ABOUT the time that Khrushchev was spreading good will by promising to bury us (peacefully), the world's top economists and bankers met near Hamlet's haunted castle in Elsinore, Denmark, to debate the adequacy of free world institutions to service the multiplying needs of the world economy. Like Hamlet, they were unable to reach a decision.

What worried them was perhaps best described by the British economist E. A. G. Robinson when he pointed out that "peaceful" competition with the Soviets would be primarily in terms of economic performance. "Those systems will survive," said Dr. Robinson, "which best provide incomes consistently with freedom and justice." And, unless the free institutions of the West can provide growth rates at least as good as those of the Communist world, hungry and embittered peoples will opt for that system which can—even at the sacrifice of freedom.

The economists were primarily concerned with such questions as

how to combine sound banking principles with a plentiful stream of capital to underdeveloped nations. These are important questions, but they do not go to the heart of the West's dilemma.

Can an economic system which cherishes free individual choice and maximum personal opportunity outproduce a social system in which individual preferences are systematically subordinated to collectively planned goals? And if, as we all hope, the answer to this question is yes, what sacrifices of our freedoms must we make? These were some of the broader questions which haunted Elsinore last September and which continue to haunt the free world.

"Competitive intelligence"

Words often prevent us from facing up to genuine problems. Most business executives, for example, dread the words "industrial espionage." Yet, many of them will be quick to defend the practice of "competitive intelligence" which their own firms engage in. A re-

cent study of some 200 leading executives reveals that nearly all of them consider industrial intelligence as "part of the game" as long as it is held within legal and moral limits.

No business would long survive without a fairly elaborate intelligence network concerning the activities of competitors. Indeed, the absence of industrial espionage would, in itself, indicate a pure monopoly, for competition depends upon an adequate system of information. Unlike international spying, moreover, the results of industrial espionage will be, more often than not, more efficient products and better managed businesses.

Of course, just as competition is regulated by laws which prohibit "unfair" practices, such as spurious advertising claims, so our patent laws protect the inventions and products a firm has developed and paid for. But there is a broad area of company activities which is not protected by law, and it is here that competitive intelligence has an important role to play in keeping business competitive and efficient.

Grand strategy

The marketing strategy of manufacturers of consumer durables continues to be to sell the consumer on the "need for seconds." As the sale of autos, TV sets and refrig-

erators comes to depend more and more upon the replacement of old models, manufacturers are finding it difficult to maintain the pace of the postwar years. In an effort to overcome this difficulty, they are trying to persuade the consumer to buy more than one model for the sake of convenience and personal prestige.

This strategy is beginning to encounter fairly widespread consumer resistance. As an increasing proportion of the consumer's discretionary income goes into repaying debt obligations of various kinds, there is an unwillingness to spend what is left for undifferentiated additional products.

There is good reason to believe that the over-all buying trend will be away from durable goods in the next four or five years. Manufacturers who wish to resist this trend will have to strive for much greater product differentiation than in the past.

Table manners

The Canned Pea Council has just completed a study on how much time and effort it takes to eat a can of peas using a knife as a utensil. We don't know whether the study was prompted by the table manners of American families, but the Council has decided to look for a horticulturist who can develop a square pea that will not roll off the blade of a knife.—M. K.

THE LESSONS OF VIETNAM

A study of the problems
faced by U.S. aid programs
in formerly colonial areas

by Ralph Lee Smith

■ AMERICANS interested in economics are becoming more and more aware of the problems, successes and failures of one of the largest economic programs ever undertaken by any nation—that of assistance to developing countries overseas.

While each country receiving economic and technical assistance from the U.S. presents different problems requiring different solutions, the story of American aid can perhaps best be analyzed in terms of one country, and in terms of the results which an assistance program has produced there. An apt subject for such analysis is South Vietnam, a country literally saved from extinction by American economic and technical aid.

The basic problem faced by the government of South Vietnam—and by U.S. aid officials—is that of developing a classic colonial economy into one which can and will support an independent nation. In this respect, South Vietnam resembles most newly independent colonial areas. Before World War II the country's exportable natural resources were rice and rubber. Its domestic market for finished goods was largely reserved for French manufactured products, because domestic industry (except small industries such as rice processing) was something of an unknown item in a country 85 per cent agricultural.

In this economy, rice growers were landless and at the mercy of



the large landholders—both Vietnamese and Chinese. They paid land rents amounting to 60 to 70 per cent of their crops, and paid 1,000 per cent interest on loans that they often could not avoid making.

In poor crop years, people starved in colonial Vietnam as they did in other countries of Asia. The system also resulted in an almost complete dearth of trained local technicians, managers and administrators.

After the French defeat at Dien Bien Phu and the division of Vietnam at the 17th parallel, French forces and French capital withdrew rapidly, removing even these two precarious props from an economy that was at best in the embryonic stage.

Chaos and danger

It is difficult to avoid a strongly favorable verdict on the U.S. aid program as a whole. It enabled South Vietnam to pull through the first few years of chaos and danger, to lay firm foundations for its national existence as an influential member of the Asian community and a strongly committed member of the free world alliance. Cost to the U.S. thus far: \$1 billion.

At first, most of the aid went to build the army and to assist and resettle the 850,000 refugees that fled from North Vietnam before the Communists sealed the escape

routes. The balance has steadily shifted; this year almost half of this aid will be devoted to building the nation's economy. Our assistance has been directed toward:

- Rebuilding of the nation's rice and rubber exports, largely destroyed by the long war.

- Diversification of agriculture to reduce the need for imports.

- Creation of appropriate light industry, largely based on raw materials available in the country.

- Supplying of consumer goods; and underwriting of the nation's international trade deficit until the economy can achieve a balance of payments.

This program is well designed to meet the basic problem of conversion of a colonial economy. It has met with varying degrees of success in its various areas. Several points stand out:

- The agricultural phase has been successful and reflects important facts about the "technical assistance" approach.

- U.S. aid stopped runaway inflation during the first few years, but generated controversy as to the wisdom of U.S. methods.

- Controls on the program, repeatedly criticized in Congress and the press as too lax, have actually been too stringent in some areas and have hampered progress.

The U.S. has been least successful in what is perhaps the most critical part of the "colonial econ-

omy problem"—helping to create a balanced industrialization. This reflects some of the deepest problems in America's approach to foreign aid.

With U.S. help, the government of South Vietnam restored production of its most important crop, rice, within the context of sweeping land and agricultural reform. All land holdings in excess of 245 acres must be surrendered to the government for redistribution to tenants or landless cultivators. Landowners are reimbursed, receiving 10 per cent of the value of their land in cash, and the rest in bonds that can be used to pay taxes or to buy shares in government-owned industries. They thus transfer their investment into industrial development. Rice cultivators receive title to 7.5-acre plots, for which they pay the government over a period of six years, at an annual rate not to exceed 25 per cent of the value of their crop.

Production revived

Extensive land reform has been carried out in the fertile Mekong River delta, Vietnam's "rice bowl." By 1957, despite greatly increased domestic consumption, South Vietnam again became a rice-exporting nation. Exports in 1958 totaled 180,000 tons; this year they will be about 300,000 tons. Rubber production has been similarly revived. In 1940, 51,000 tons were pro-

duced; in 1947 this figure had dropped to 30,000 tons; in 1957 it was up to 70,000 tons. The figure continues to rise. Despite vulnerability to world market conditions, Vietnam must necessarily rely heavily on these two crops to balance its international trade deficit until its economy is more completely self-sustaining.

Diversification of agriculture is proceeding rapidly. The hitherto uncultivated uplands north and west of Saigon have been opened for settlement in a concerted program. New farmers here receive 12.5 acres. A variety of vegetable staples, previously imported, are now being grown. In addition, industrial crops are proving highly successful, such as *kenaf* and *ramie*, fiber plants suitable for making sacks, rope and tough cloth. This adds up to a true success story, accomplished with technical assistance and at moderate cost.

It is in agriculture that technical assistance can probably produce the greatest and most immediate results. Backed with a modest investment in seeds, tools and modern machinery—and, in this case, the funds to implement land reform—a small group of agricultural experts can often accomplish wonders. The result is almost immediately evident, and shows up in easily understood figures—both factors assuring benevolent Congressional reaction.

However, Congress may expect that technical assistance should be able to attain equally prompt results, at equally moderate cost, in other fields, including industrialization. Legislators—and voters—have apparently hoped that heavy expenditures in *all* fields could be avoided if we just supplied technical “know-how.” Significant agricultural successes appear to spur this false hope.

Inflationary pressures

South Vietnam's economy was in a shambles after the Geneva Conference, which ended the Indo-China war. The problem was greatly aggravated by the necessity of waging open warfare for a period of two years against large and formidable partisan bands that nearly succeeded in toppling the fledgling government. U.S. financial aid paid Vietnamese soldiers and also provided emergency payments to the flood of refugees. But, as such payments had to be in *piastres*, the local currency, the U.S. was obliged to buy large amounts of currency from the South Vietnamese government. Such purchases, combined with the increase in the number of “salaries” in circulation, and the scarcity of consumer goods, put extreme inflationary pressures on the economy.

America's response was to make a large selection of consumer goods available through a counterpart

fund program. Dollars used to purchase *piastres* were banked with the Vietnamese government and allocated, under a licensing system to local merchants for the purchase and importation of consumer goods. There is no doubt that this response “worked”; the goods absorbed the surplus purchasing power and inflation never got the upper hand.

It also had other effects. By 1956, the program had spawned 12,000 active import firms, most of them badly inexperienced and badly undercapitalized. They lived on the aid program, and some made large immediate profits from nefarious uses of the import licenses. The activity absorbed an appreciable amount of the country's scarce managerial and administrative skills. In 1955, commercial activity was the largest single segment of the nation's gross national product, slightly surpassing agriculture.

Some observers wondered if this was the only feasible course to curb inflation. Some suggested that the U.S. was using the aid program to dispose of its own output of consumer goods rather than as a device to initiate long-range development in South Vietnam. Others believed that the correct way to meet the problem of inflation was through a higher tax base, enforced savings and withholding of Vietnamese government approval for

import licenses for unnecessary consumer goods. Such changes, however, were never made. By 1957 the economy was beginning to take forward strides, and the danger of inflation receded. U.S. aid now focuses more heavily on long-range development, and most of the fly-by-night importing firms have passed from the scene.

The suspicion of poor control over U.S. aid funds after they are turned over to the "host" government has been voided frequently. Actually, every important step of the aid process is carefully scrutinized and controlled. Funds are released gradually for mutually agreed-upon projects only after receipt of a complete accounting by the Vietnamese government for funds already allotted to the project. Controls already required by Congress for disbursement of aid funds are so abundant and complicated that virtually no newly independent nation can comply with them all and, therefore, cannot utilize all the authorized aid.

Political control

A more serious problem lies in the control exercised over the recommendations of responsible aid officials in the field, by higher-ranking persons in Washington who know little of the situation and who may sometimes assess the matter on a political basis rather than on its merits. Aid officials in

Washington, with an eye on Capitol Hill and the next foreign aid debate, might well like to see safe, simple, short-term, high-return projects launched in the field. These are not necessarily the projects that are most needed for balanced industrial development.

Americans have had a good deal of difficulty in coming to terms with several facts about industrialization of poor countries:

- It is expensive.
- There are few "technical assistance" bargains.
- It is slow.
- It is so complex that a certain percentage of costly mistakes is almost unavoidable.
- It often requires investment in natural resource development, costly and time-consuming personnel training programs, and in basic facilities—none of whose returns can be brought to book on an annual basis.
- It goes poorly if done haphazardly on unpredictable annual appropriations with no over-all plan.
- It cannot be left to private capital when private capital does not exist in sufficiently large blocs and cannot be attracted because of political or economic uncertainties.

This latter point has been especially hard for many Americans to understand. Along with U.S. dollars, many aid officials have insisted that we export our economic philosophy. This is even written

into the basic law covering disbursements: the Mutual Security Act requires that our programs should promote private enterprise. Under John B. Hollister, this philosophy was firmly observed; and many top-ranking U.S. officials in our aid programs are still more or less hostile to development programs in which foreign governments participate.

In 1958 Charles B. Warden, Chief of the Investment Guaranties Staff of the International Cooperation Administration, addressing a conference on investment conditions in South Vietnam, warned the audience that government participation in industrial development is a "pattern" that "has developed with considerable consistency." It is, he said, "something to be met and dealt with." He speculated that the reason for this misguided approach was that, in the early stages of development, talented people enter the government, whereas later they enter industry. During the ensuing question period Warden added, "I have always been puzzled by this urge on the part of governments to take over certain types of industries, or to invest in such industries."

Tran Kim Phuong, First Secretary for Economic Affairs of the

Embassy of South Vietnam, clarified the problem for Warden: "We are giving to private enterprise, domestic or foreign, a fair chance. But if private enterprise does not meet our needs, then the government of Vietnam will be obliged to undertake the job because it should and must be done."

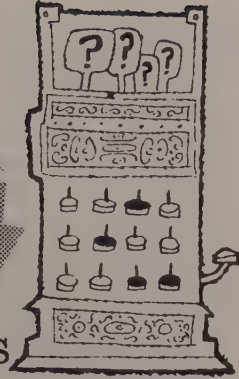
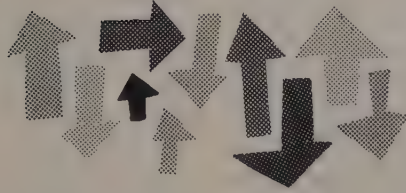
U.S. grappling with the problems of industrial development has been a serious retarding factor in our well-intentioned efforts to make South Vietnam self-sustaining; and this struggle has undoubtedly had its impact in other countries, too. However, there has been perceptible improvement during the past two years. The Development Loan Fund shows increasing American understanding of the value of a long-range approach. ICA is now placing much greater emphasis than formerly on industrial development of South Vietnam, and this year will probably place more loans for this purpose than for either military aid or commercial imports.

With all its strong and weak points, the U.S. aid program has given South Vietnam a real chance to achieve an independent national existence. Its lessons can be as valuable as its accomplishments, if they are truly understood. ■

When in Vietnam

WHEN SPOKEN, Vietnamese sounds like Chinese, but it is written with the Roman alphabet and accent marks.

the best defense



against business cycles

Wisdom, not government action, in the private sector of the economy

by John McKnight

■ CAN WE SAY with assurance that we have seen the last of the major depressions that plagued our economy from 1837 to 1937? Have the changes made in our institutions in the 1930s and 1940s assured us of only moderate downturns in the years ahead?

It would seem hazardous to assume so. To be sure, there are many elements of strength in the economy as we look ahead to the 1960s and beyond. At the same time, the postwar economy has been one in which special forces were at work.

The most notable of these had to do with the rebuilding of consumer and business stocks of durable goods, housing and producers' plant. This process has not yet stopped and has in turn generated

new demands. Another important postwar influence was the increased mobility of the population. The spreading of population from center city areas to the suburbs and beyond has been part of the new dynamism associated with postwar economic strength.

In addition, few serious problems have appeared. Those that have arisen have caused concern but no immediate danger. Their potential effect may well be dangerous, and hence must be included in any evaluation of future cyclical trends.

The harmful effects of postwar recessions have indeed been cushioned by social security, unemployment compensation and other government outlays. Transfer payments were of particular import-

ance in offsetting the fall in personal income in 1958. Their rise during the first half of that year helped to limit the decline in income to only one or two per cent.

The tremendous growth of federal, state and local government spending has also been important in sustaining economic activity in the postwar years. A simple example of the impact of this spending—in a negative way—was provided by the unemployment created in the aircraft industry in 1957, following a cut-back in military spending.

The increased role of government in the economy has raised other questions. There has been, for example, a steady deterioration in the value of the dollar under the impact of rising taxation over the past 20 years. Again, our highly progressive tax structure may well be discouraging initiative and is certainly promoting tax-evasion.

A slowing down

W. S. Woytinsky has pointed out [*CHALLENGE*, October, 1959] that GNP per capita was lower in 1958 than in 1953, and that industrial output per capita in 1958 was about eight per cent below the 1953 level. Similarly, disposable income per capita, in constant dollars, was less in 1958 than in 1957 and 1956. It was 18 per cent higher than it had been in 1949, equal to an average yearly rise of

slightly less than two per cent.

The stability of per capita income, in constant dollars, over the past four years reflects in part the current high birth rate. It also indicates, as Dr. Woytinsky points out, a slowing down of the growth rate of the United States economy over that period.

A weighing of our chances for continued avoidance of longer and deeper cycles must take into account those changes which work themselves out over more than four years.

For example, one of the major influences determining the economic health of the 1960s will be the continued rapid growth of population. This gain—about 18 to 20 per cent in the next 10 years—will mean a further expansion of the market for goods in the United States. This market will be shaped as well by further changes in the population structure, with rapid growth of the high school and college age groups, and of those over 65.

Another important determinant of economic health of the 1960s will be a steady increase in industrial research. This has created jobs in the past decade, has led to the development of countless new products, and to better ways of making existing products. This kind of growth will be important in preventing a major depression.

Again, despite the drop in total exports in 1958, there has been a

slow but steady growth in foreign markets for United States manufactures. The possibilities for further gains are bright. Asia and Africa pose an impressive challenge to the marketing and production talents of this country in the years ahead.

The incentives for increased investment in capital goods and producers' plant will be strong over the next decade inasmuch as that part of the population in the work force years will continue to be a declining percentage of total population through 1965. Research spending will be almost an automatic guarantee of good levels of capital goods spending in the 1960s.

Economic landscape

Nonetheless, there are many features of the economic landscape which give serious concern. These include the remarkable strength in construction in the past decade and the question whether the same kind of strength is likely in the 1960s. This industry has benefited from the readiness of Congress to pass bills to help the demand for and financing of housing, and also to finance highway construction. In the past the building industry has been subject to a "long" cycle averaging about 17 years. While new types of home financing have made an important difference in the housing market, the possibility of a downtrend in the demand

for housing cannot be ruled out.

Other sources of trouble come to mind. There has been, for example, the vast buildup in mortgage debt in the past 10 years. Residential mortgage debt totaled about \$125 billion in mid-1959. This was seven times the amount of such debt outstanding at the end of World War II and constituted 37 per cent of disposable income, annual rate, in June 1959. Residential mortgage debt was 20 per cent of disposable income 10 years earlier, and 23 per cent in the prewar year 1940.

A rapid buildup of state and local debt has also been one of the outstanding features of the last decade. This debt amounted to \$62 billion in June of this year, higher by \$41 billion than in mid-1949. The increase in state and local debt over the decade was larger than the increase in federal debt in the same period. This will mean further increases in tax rates at the state and local level, and further impairment of the purchasing power of the dollar.

Of importance also is the fact that the economy seems to be running out of money. Additions to the money supply in recent years have not been enough to satisfy the demands for money. The result has been a steady advance in the cost of money. The possibility of a money crisis of the old-fashioned variety, such as was seen in the 1929 depression, and earlier, seems

more real than it did five and 10 years ago. There is no assurance that the judgment of the monetary authorities will be able to counteract the harmful effect of money shortages on the economy.

Business generally must count as well on reasonable protection to profits—from taxation—and on sustained demand for consumer goods if it is to maintain capital spending at high levels. Stability, rather than growth, in real income per capita, as seen in recent years, will tend to slow down demand for capital equipment.

In sum, the economy may be upset from a number of different directions by forces which may take longer than four years to make their full impact. Gradual attrition from these forces may render the economy less able to meet a crisis which could otherwise be met. It would therefore be rash to conclude that we have successfully rid ourselves of the major cyclical movements known in the past, leaving only moderate recessions to be coped with in the future.

Can the government nevertheless mitigate the severity of the present four-year cycle? Can it prevent the loss of national produce resulting from such setbacks to the economy? In the opinion of this writer, the economy cannot continue at high rates of operation and growth without some pauses and setbacks. With hundreds of

thousands of separate decisions being made from day to day, it is inevitable that errors of judgment will lead to periodic corrections.

Sharp changes

For example, sharp changes in inventory investment are a pronounced feature of present-day recessions and revivals. On the upward phase of the cycle, the average change in inventories accounts for some 25 to 35 per cent of the change in gross national product. On the downward phase, the change in inventories generally accounts for from 30 to 40 per cent of the change in gross product. Can government prevent these swings?

Similarly, can government prevent industry from adding too rapidly to industrial capacity when it appears that such additions will result in overcapacity and subsequent downturns?

One thing which could be done would be to make more information available about inventory and capacity changes so that business will have up-to-the-minute information on these important factors. The wide publication of such ratios as inventories to sales by economic and industry sectors, and of sales to total capacity, by industry, would give definite guides to danger points in the above areas. A drop in the sales to capacity ratio in a particular industry be-

low, say, 85 per cent, would be a warning that increased efforts for new markets or for cost cutting measures is necessary.

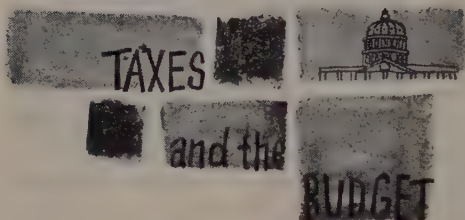
Government can provide further assistance by taking specific action on taxes when the above ratios move below previously agreed-on checkpoints. A general tax reduction might, for example, go into effect whenever the ratio of total industrial production to total industrial capacity drops below some agreed-on figure. The reduction of taxes would act as an immediate spur to consumer and business spending. Spending by business would not necessarily be for additional capacity for existing products but for research and development on new products. This would assure further economic growth and a rise in living standards.

Perhaps the essential element in

preserving a vigorous and growing economy is the maintenance of decision-making to as large an extent as possible in the hands of industry, labor and consumers. The continued growth of government's role can lead to stagnation and a lack of growth. One aim should be to lessen the relative importance of government in the economy, keeping at the same time the kinds of regulation and social insurance which have grown up over the past two decades. These have been helpful, by and large, as compensatory forces during a recession. However, since World War II, our economy has not been tested by a combination of unfavorable factors all appearing at the same time. It can best meet such a challenge in a climate of greater relative importance for the private sector of the economy. ■

New Method for Appraising Antiques

A NEW TECHNIQUE developed by Dr. George C. Kennedy of the University of California helps archaeologists determine the age of prehistoric rocks, pottery and lava flows. By heating a previously fired object to a high temperature and then measuring its light flow, it is possible to date objects up to 500,000 years old, and range may eventually be extended to two million years. When rock or pottery is heated to a temperature of about 800 degrees Fahrenheit under a photomultiplier vacuum tube, a thermoluminescent glow is released. The number of years since the object was last heated can then be fixed by measuring the rock's total glow and mean radioactivity (which can be easily measured) according to the formula: age of rock equals glow divided by mean radioactivity. Dr. Kennedy discovered the technique when trying to determine the exact ages of small terra cotta figures buried in Indian graves in Mexico.



by Richard A. Musgrave

■ AS YOU TURN to the editorial pages of your morning paper, chances are that you will find yourself confronted with this dire prospect: unless immediate and utmost efforts at retrenchment are made, an ever-rising flood of public expenditures will engulf the economy, and swelling tax burdens will destroy our free-enterprise system. What basis is there for these editorial fears, and what are the economics of the matter?

To begin with, let us consider just how the budget has grown in the past. To demonstrate how rapid this growth has been, some politicians are fond of comparing the rate of federal spending today with what it was in George Washington's day. On that basis, they conclude that the government to-

day spends more in a day or hour than Washington spent during his entire administration.

This is, of course, a nonsensical comparison. It overlooks the essential fact that over the years there has been a vast growth in our economy. Given this growth in population and per capita income, it is obvious that public budgets must have grown too. The interesting and significant question is not whether public expenditures have grown in absolute terms, but whether they have risen relative to total (public plus private) expenditures or output in our economy.

As shown in the table on page 20, total public expenditures (including federal, state and local government) rose at about the same rate as net national product

between 1890 and 1929. During the depression years, public expenditures increased twice as fast as net national product—initially the result of a sharp decline in output and later through rising federal programs of the New Deal. During World War II our ratio came to exceed 50 per cent, but by 1948 it had returned to approximately its prewar level. This was the brief period of respite between World War II and the cold war. Thereafter, the ratio has shown a renewed upward trend, although it has remained far below World War II levels.

Changes in the ratio of total public expenditures to net national product are best explained in terms of the two major kinds of expenditure: civilian outlays, and defense and defense-related outlays. Up to 1940, this distinction is unimportant; thereafter, it becomes crucial. While the 1948 ratio for defense outlays was much above the 1940 level, that for civilian public expenditures was substantially less. Indeed, the latter ratio for 1948 had about returned to the approximate levels of 1929 or, for that matter, 1902. That is to say, there had been little change in this ratio for the first half of the century.

While the ratio of total public expenditures to net national product rose somewhat during the last decade, a substantial part of the rise was due to the defense compo-

nent. Two thirds of the increase in the over-all ratio between 1929 and 1958 was due to increases in defense-related outlays; only one third was the result of expansion of civilian programs.

Indeed, there is no historical support for the contention that expansion of civilian programs has been steadily accelerating. On the contrary, past experience suggests that civilian expenditures by government tend to grow at about the same rate as does total output.

A similar analysis might be applied to the division of total public expenditures between the federal, and state and local governments. While federal expenditures today contribute about 70 per cent of the total (compared to 50 per cent in 1940 and 40 per cent in 1929), this does not presage a growing trend toward centralization. Rather, it is again a reflection of the growing rate of defense expenditures which, by their very nature, must be made at the central level. Indeed, today's federal share in civilian public expenditures is substantially below prewar levels.

What does this record tell us about the outlook for the future? Civilian programs may be expected to grow with total output, as they have done in the past, and perhaps slightly faster. As a family moves up in the income scale, it tends to spend more on luxuries and less on necessities. The same holds true

for people as a group. As output increases and per capita incomes rise, the composition of consumer expenditures may change in such a way that great emphasis will be placed on such goods and services as are supplied through the public budgets—education, public health, transportation, nuclear development and similar programs. This may result in an increased public share.

Voter preference

Some economists, like Alvin Hansen and John K. Galbraith, argue that the public has undervalued the need for public and overvalued the need for private outlays, and have urged an adjustment to redress the balance. While I tend to agree with this view, what matters

are the preferences of the voting public, and here a drastic change is not likely. This is all the more true since defense outlays are apt to continue at high levels, and it is unlikely that the public will be prepared to pay additional taxes.

What about the tax outlook? Except when threatening unemployment calls for a deficit budget, public expenditures must be paid for by taxes. Prospects for the level of taxation thus depend on the expenditure outlook.

If we take the optimistic view that defense outlays can be maintained at present absolute amounts, the budget picture should be eased by rising tax revenue as the economy and the tax base expand. Such revenue gains could be used either for increased civilian programs or

GROWTH OF PUBLIC EXPENDITURES IN THE U.S. (as per cent of net national product)			
Year	Total	Civilian	War & Defense Related
1890	8%	6%	2%
1902	10	8	2
1913	7	6	1
1923	10	7	3
1929	11	9	2
1932	23	19	4
1940	20	17	3
1948	20	9	11
1958	28	13	15

for tax reduction, or both. But if we take the pessimistic view that defense expenditures will have to be raised along with growing output, there is no prospect for tax reduction; tax rates may even have to be raised to meet increased civilian needs.

On balance, chances are that taxes will continue to absorb about 20 to 30 per cent of our national income. Can our economy bear such a level of taxation?

Upper limit

Soon after the war, Dr. Colin Clark, a well-known Australian economist, argued that 25 per cent of national income should be considered the upper limit for a tenable tax burden. Although this statement was accepted as gospel by many people, the record of our economy during the last 20 years does not support it. Through most of this period, we have carried a much higher level of taxation, and yet we have had a highly prosperous and rapidly growing economy. Per capita consumption (after allowing for changes in price level) is now two and one half times greater than 1929 levels, and investment is nearly 50 per cent larger. Clearly, current rates of taxation have been compatible with a highly prosperous economy.

This does not mean that there is no limit to a nation's capacity to bear a taxload. But this limit will

change from time to time, depending upon the nature of the tax structure, the type of expenditures and the attitudes of the people toward their public programs. The limit—or better, range—at which increased taxation becomes critical involves political as well as economic considerations.

In posing his limit of 25 per cent, Clark was concerned primarily with the political aspect. It was his contention that people would be unwilling to tax themselves by more than 25 per cent, and thereafter would prefer finance by inflation. Leaving aside the particular limit of 25 per cent, this line of reasoning has some merit. The resistance of any one taxpayer to increased taxation becomes more acute as the ratio of taxation to income rises. And, when tax rates are high to begin with, more people must be called upon to contribute if taxes are to be raised further.

Glaring loopholes

A revolutionary change has occurred in this respect since the 1930s and the growth of war and defense outlays. Even if we succeed in closing some glaring loopholes in the taxation of higher incomes, the income of the rich will never again suffice to pay for the bulk of public services. A broader-based tax system will remain necessary, and the average voter will continue to find himself the margin-

al taxpayer. As a result, the politics of budget policy have changed. In the final analysis, our future capacity to tax will depend on how much the voter values public as against private services, and by how much he is willing to tax himself (rather than the other fellow) to pay for them.

Apart from these matters of political preference, it remains to consider the effects of budget policy as a whole (and not just taxation) upon the working of the economy. Some of these effects are highly favorable, such as the productivity-increasing effects of public investment in education, the contribution of public investment in research to progress throughout the economy, and so forth. Other effects may be unfavorable. For example high tax rates may discourage the incentive to work and invest.

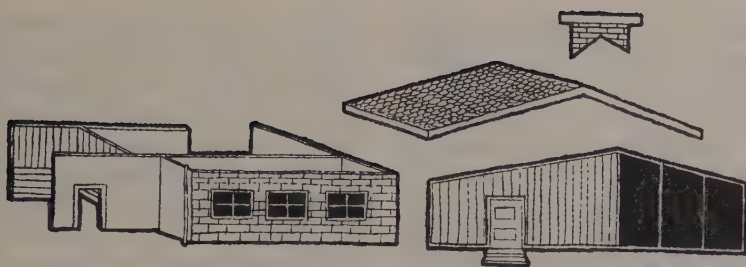
Our tax structure can stand improvement. At the same time, it is

not nearly as bad as some would like to have us believe. On the whole, it has served its purpose fairly well and with some improvement and revision should continue to do so in the future. As I read the evidence, the net contribution of large budgets to prosperity has been distinctly positive.

Looking ahead, there can be no question that our economy can sustain the cost of such efforts at defense and international aid as may be needed to protect ourselves and the rest of the free world. At the same time, levels of taxation required to sustain this effort will curtail the margin of taxable capacity available for public services of the civilian type. However, this margin will remain sufficiently wide to permit a healthy diet of public and private consumption, provided only that the voter and consumer is willing to recognize the value of public services and to tax himself accordingly. ■

The Budget—New to the U.S.

THE WORD *budget* is derived from the Old French *bougette* meaning little bag. Today, however, the French use the English word *budget*, and *bougette* is archaic. In the U.S., an informal accounting system was used and a formal budget system was unfamiliar to most citizens and to government officials until the turn of the century. The U.S. was the only great nation without a budget system, and its state and local governments were in the same plight. Finally, in 1906, the state of New York studied the idea of budgeting and adopted a fiscal budget. President William H. Taft submitted the first federal budget for the fiscal year 1914, but Congress preferred to ignore it. It was not until June 10, 1921 that the National Budget and Accounting Act was passed, providing for a yearly federal budget.



Home-building: How up-to-date?

With few exceptions, no industry is involved in more widespread and rapid technological ferment

by Miles L. Colean

■ ON ONE OCCASION, when he appears to have been suffering from some kind of frustration, Rudyard Kipling gave vent to his feelings with the bald assertion:

*"How very little, since things were made,
Things have altered in the building trade."*

The poet, however, could hardly have been closely observant. Even at the time of his writing, startling uses of cast iron had been developed (the Eiffel Tower is recognizably different from the pyramids), and iron itself had already been made obsolete by the invention of structural steel and the skeleton steel frame. The balloon frame, a major advance in light dwelling construction, had long since been invented and was in

wide use. Important improvements were being made in plumbing and heating. The use of gas for cooking fuel and illumination had been well established, and electric wiring was being introduced.

These are a few examples of the then existing technological stir in the construction industry that passed Mr. Kipling's notice. The stir has continued since the time of his irritated pronouncement. Nevertheless, the opinion persists that what he said is still true, and that the construction industry, and especially the house-building part of the industry, is a laggard in the technological race. The housing industry, it is asserted, is plagued by work rules and local ordinances and, worst of all, is ignorant of, or

indifferent to, the needs it is supposed to serve. How much of this indictment is true?

The industry unquestionably has its shortcomings, and it certainly has its problems. Its shortcomings arise from the exceedingly complex demands made upon it to meet the variety of its markets, not all of which have been equally well served; and its problems in large measure come from the conflict between the rapidity of technological development on the one hand, and the ingrained methods of labor and the inertia of government on the other. If construction were still conducted after the manner of the Pharaohs, the shortcomings would not be noticed; and the problems created by labor's work rules, jurisdictions and governmental regulation would give little trouble. It is change that has brought about the conflict, and the existence of conflict is the best evidence of the existence of change.

The labor problem

The labor situation is a good case in point. At the outset, it may be noted that the conflict between work rules and operating efficiency is not confined to construction. It is a major problem with the railroads and it figures crucially in this year's steel negotiations. It is the affliction of every highly unionized industry. The problem, moreover, is not confined to this

country. Labor rules are generally more restrictive in Europe than here; judging from accounts of Russian labor practices as revealed in the construction of the U.S. exhibit in Moscow, our artisans are models of technical ability and efficiency.

As a matter of fact, the process of adaptation of traditional labor practices to modern requirements has already gone much further than most people realize. Excavation and earth moving have been thoroughly mechanized; major simplifications in the handling of materials have been effectuated; and the use of power tools is now broadly established. Prefabrication is winning its battle with local restrictions, and the "mobile home" is offering a new challenge both to building trades labor and local regulation.

Of course, there is still a long way to go. Fairly widespread resistance against such practices as spray painting and the prefabricated plumbing stack persists. The constant introduction of new materials and new methods of installation keeps the jurisdictional problem at a boil. But the fact remains that, while progress has been delayed, it has not been defeated; and it should now be clear to all but the most impatient that the rate of progress is accelerating.

The situation with building regulation is similar. Building codes

are massively resistant to change. The process of code revision is glacial. To accommodate even a modest innovation, tests must be made, conflicting interests must often be reconciled and legislative action may be required. Yet even here progress is being made. National and regional code-writing bodies have had some success in standardizing the organization of codes and, to a substantial extent, their provisions. The adoption of "performance" rather than "specification" provisions is gradually spreading. It is undoubtedly true that within the last 10 years more innovations have obtained wide code acceptance than in the preceding generation.

Striking changes

There are two quick ways to get a sense of the progress in house-building. One is to compare the illustrations in a current issue of any building magazine with those of a prewar issue of the same magazine. Such a comparison will reveal striking changes. Today's houses are more convenient in arrangement than their predecessors. They are far better equipped. In many instances materials commonly used are new and of much better quality—roofings, wall finishes, flooring materials, hardware, windows, cabinets plumbing fixtures, heating equipment, air conditioning, all are as different from their prewar pro-

totypes as modern man is from his Neanderthal ancestors.

Back of the materials are new methods of construction. Illustrations in current magazines will show how builders are using paneled wall and floor elements, prefabricated roof trusses and pre-assembled storage walls. Advertisements feature not only building components but also completely integrated, factory-fabricated houses ready for rapid assembly at the site. All these changes reveal a technological march unparalleled anywhere in the world. They also demonstrate that obstacles of obsolete work rules and building regulations are, to some extent, being overcome.

The second quick way to check on progress is to look at the statistics of house-building. In 12 years (1947-58 inclusive), 13 million new nonfarm dwelling units (houses and apartments) have been produced. This is equivalent to 45 per cent of the entire stock of nonfarm housing in 1940. The bulk of this housing has been for young veterans and other families of modest means. In sum (and there is good reason to believe that the figures understate the facts), the rate of construction exceeded net new nonfarm household formation during the period by seven per cent, thus permitting the demolition or abandonment of a large number of worn-out structures.

For those who, notwithstanding all this, are impatient with the rate of progress, it may be worthwhile to examine briefly the character of the job that faces the housing industry. The nation's total stock of housing now comprises some 55 million units, or well over 50 times the number of units newly built each year. This vast supply of existing houses obviously provides the major part of our shelter requirements. The existing supply is long-lived and it must be maintained and repeatedly improved in order to fulfill its function. Annual expenditures for alterations, additions, conversions, repairs and maintenance of *existing* housing are probably close to the amount spent for *new* dwelling construction.

The construction industry, therefore, must be geared not only to the annual production of a large volume of new construction; it must also be equipped to provide the manifold, intensely local, piecemeal services required by the existing supply. These services require a greater variety of skills (and, in some respects, better skills) and a wider variety of materials than may be required in a typical new house. They also require numerous specialized contracting organizations and distributing facilities capable of filling a great variety of individual, small orders.

Such requirements are bound to

influence the organization of all aspects of the industry since, in most communities, there must necessarily be a good deal of interchangeability of activity between the old and the new. It is this situation (which prevails in other types of construction as well) that greatly contributes to the perpetuation of the organization of labor by crafts, of the subcontracting system, and of the small-scale character of the industry as a whole.

Individualism

Another requirement placed upon the industry operates to the same end—namely, the demand (quite large in number although it usually comprises only a relatively small portion in any one community) of specially designed and highly individual houses. To meet this type of demand, the industry must again be able to provide a wide variety of skills and specialty organizations; and, again, in order to assure a reasonable continuity of employment, the artisans and subcontractors involved must be able to shift easily to other types of work. Much residential construction in small places, irrespective of price, falls into this category of individually built units.

Apartment construction poses much the same kind of problem. Apartment construction is likely to have cyclical characteristics. Only the largest communities can assure

constant employment for large, close-knit organizations devoted exclusively to apartment construction. Moreover, one apartment building is almost certain to be somewhat different in its composition of materials, equipment and methods from another, thus requiring a correspondingly different composition of crafts and subcontracting organizations.

Taking all these considerations into account, it may be roughly estimated that probably no more than half the annual production of new houses (that is, not more than a quarter of the total expenditure on housing) can be readily organized along mass-production lines. In comparison with the number of units produced in the recognized mass-production industries, this potential may look small. Nevertheless, it does provide a challenging opportunity in which there are now a number of successful respondents. Unfortunately, we have too little information about the construction industry to know how much progress is being made toward multiunit production. We do know, however, that there are a considerable number of site builders who are capable of putting up several thousand units a year, and that at least one prefabricator, through recent mergers, has attained a capacity of more than 40,000 units annually. Based on Department of Commerce figures, the

total prefab production will be around 65,000 units this year. Beyond this, close to 100,000 house trailers, or "mobile homes," (which are not counted among the housing starts) are being turned out annually.

Becoming more choosy

All these are signs pointing toward the "industrialization" of house-building, or mass production, or whatever it is to be called. But in the case of housing, meeting the demand of a mass market and mass production may be two different things. For one thing, the mass housing market is getting to be *less* of a mass. True, it is growing in numbers but, with the broadening distribution of higher incomes, it is also becoming more choosy. The problem is how to reconcile the developing industrial processes with the individualized, widely diversified housing demands so as to maximize their influence on the housing market.

The numbers involved, even if we look toward the expanded market of the late 1960s, are hardly great enough, while the differences in site and climatic conditions are much too great, to permit this problem to be solved merely by creating a variety of models as is done in the automobile industry. There can, in fact, be no one solution. Undoubtedly, factory-built houses, including "mobile homes"

(which rarely are moved once they have found a resting place), will increase in numbers. But relative to the total, their proportion will remain about the same. With the increasing concentration of population in metropolitan areas, more opportunities will be created for large-scale site builders; but the days are past, as they well recognize, when they can repeat the monotonies of the early postwar era.

I believe that the greatest promise of meeting the housing industry's problem lies in the development of larger building components, mainly wall, partition, floor and roof panels, capable of being adapted to a variety of building types, plans and designs, and of "modular coordination," that is, the adaptation of standard units of measure by manufacturers generally which permit the assembly of all components without cutting, fitting and patching.

Much effective research and promotion is already being carried on in these areas, both by individual manufacturers and by professional

and trade organizations in the building industry. At the same time, industrial research is continuously turning out improved or new products that contribute to the simplification of the construction process as well as to the quality of the result. A mere catalog of such activity would fill a sizable volume; but one need only mention such developments as aluminum, glass fiber and foam plastics to get an idea of how much attention industry is giving to the technology of construction.

All in all, it is undoubtedly safe to say that outside the spectacular areas of electronics and atomic development, no industry is at the present time involved in a more widespread and rapid technological ferment than is construction. This very fact produces its growing pains and intensifies—temporarily, we may hope—the problems with labor and codes we have already discussed. But the direction and strength of the movement are clear. Mr. Kipling's complaint has lost whatever force it may once have had. ■

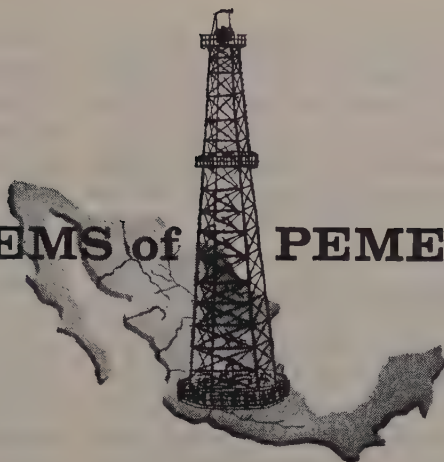
The Armed Forces: Pioneers in Housing

THE FIRST USE of prefabrication on a sizable scale was recorded at the close of the Franco-Prussian War. A German firm, Christophe and Unmach, was engaged in the business of constructing barracks and hospital sections in a factory, transporting them to the rear lines and then assembling them on the spot. Widespread use of prefabrication in the U.S. similarly was a result of the success of prefabricated units used by the Armed Forces during World War II.

The PROBLEMS of PEMEX

After 21 years of
mismanagement, Mexico's
nationalized oil industry
tries a new start

by Mitchell Gordon



■ LAST MARCH Mexico celebrated the 21st anniversary of the government's nationalization of the oil industry. On March 18, 1938, private concerns were forced to sell the fields, wells, refineries, pipelines and other facilities at less than a fifth of their stated value. Henceforth, these properties were to be operated "in the interests of the people of Mexico" rather than for the so-called "economic aggrandizement of foreign imperialists."

What has Mexico accomplished after 21 years of government operation of its oil industry? What lessons might Mexico's experience hold for students of nationalization and for others who might one day contemplate a similar course?

Until relatively recently, these questions might have been difficult to answer. Prior to the inauguration last December of President Adolfo Lopez Mateos, the quasi-public agency that ran Mexico's nationalized oil industry, *Petroleos Mexicanos*, or "Pemex," was extremely economical in dispensing financial figures, although in little else. Its long-time chief, Antonio J. Bermudez, who has since been deposed, once told a foreign visitor that such information was "none of the peoples' business."

Pemex's new administrator, Pascual Gutierrez Roldan, has promised to end such secrecy. He has already taken an important step in this direction. For the first time in 11 years a balance sheet

(for 1958) has been published, although he has yet to issue Pemex's first income statement. Until recently, the Mexican people had to rest content in the knowledge that they owned oil, but they had no way of telling how much this "ownership" was worth.

Evidence of shortcomings

There is little question that such secrecy cloaked an extremely poor financial and management record. While the agency has not yet published an income statement, it did take the somewhat unusual step of projecting income and expenditures for 1959—showing, quite candidly, an expected deficit of 260 million pesos. Most observers believe that Pemex incurred similar deficits in previous years.

Other evidence of Pemex's shortcomings is even more plain:

- An exporter of oil in the years before expropriation (and for half a decade thereafter), Mexico has become a chronic importer of oil, particularly of costly refined products from the U.S. Last year its oil import bill came to \$57.8 million, while exports total under \$31 million. Back in 1938 Mexico spent less than \$3 million on foreign oil and covered that amount many times over by the crude it exported.

- Mexico's nationalized oil industry has also become something of a burden on the public purse. On more than one occasion since na-

tionalization, Pemex's operating expenditures have eaten up so much of its revenues that it has been unable to meet its ordinary tax obligations. On at least one occasion, Pemex has paid its bills with the gas taxes for which it is merely a collecting agency. In 1940 its needs were so great that Pemex actually had to tap the public purse for some 60 million pesos, or about \$10 million, to meet its obligations.

Whether it ever repaid this grant, made good the gasoline taxes or caught up in its own tax arrears, the average taxpaying Mexican will probably never know. But it is an accepted assumption in the Mexican financial and business community today that Pemex's profitability, if it exists at all, is nowhere near great enough to finance even its limited development and expansion programs.

Pemex has long since ceased to reject foreign participation. Back in 1948, for example, Pemex borrowed \$10 million from the Cities Service Oil Co. in an arrangement that gave the U.S. concern certain exploratory concessions in Mexico. In addition, nearly half a dozen foreign oil firms are presently helping Mexico step up its lagging wildcat program. One of these concerns, Pauley Petroleum, Inc. of Los Angeles, claimed recently that it may have found the richest new field since the days before nationalization, in the Gulf of Campeche,

about one mile off Mexico's southwest shore.

Such foreign "interference" (supposedly abolished by the expropriation decree) has helped the capital-hungry nation step up its wildcat drilling activities considerably. In 1956, for instance, it permitted Pemex to drill some 84 exploratory wells—10 more than were drilled during the first 11 years after expropriation.

Of course, bureaucrats who must periodically account to their superiors for the allocation of scarce resources are not as likely to commit funds to such risky undertakings as are profit-seekers willing to gamble for the sake of gains they might realize themselves. Mexico's well-drilling program is still nowhere near as great as the nation's geologic potential and economic needs would seem to justify.

Need new resources

But not only the well-digging program has suffered from Pemex's poor management. Mexico's crowded capital city badly needs new fuel resources, but it will be several years before it gets its first natural gas from a pipeline which has just been started. Construction of this pipeline had been delayed for years, although it will probably cover original costs in less than five years' time. For years Pemex personnel have been compelled to put the torch to excess gas simply

because there was no money to construct facilities which would reinject the gas back into the ground.

As a result of such mismanagement, Mexico's crude oil production in 1956 was only a little over 100 million barrels—compared with 193 million pumped in 1921. While refinery output has more than tripled since 1921, it has not kept pace with demand, and oil has had to be imported to make up the deficit. Why has Pemex been so short of needed capital? In the first place, Pemex was poorly financed from the start and had to labor under the burden of a \$113-million debt to the original owners of the nationalized properties. As just another agency of the government, moreover, its vast capital needs had to compete against other equally urgent needs in the division of scarce public revenues. Furthermore, Pemex's emotional rejection of foreign participation did not permit the solicitation of foreign investments.

Another factor has aggravated Pemex's inability to turn in the kind of profit needed to finance its own growth. As a government institution, Pemex's price policy has had to consider political factors as well as costs. In practice, this has meant that Pemex has found it far more difficult than privately owned enterprises to keep prices in line with costs. It has also served to turn Pemex into an instrument

for subsidizing special interests through price discounts. In 1956, such subsidies cost Pemex more than \$30 million.

Pemex has also proved a valuable instrument for dispensing political patronage—a major reason for the sharp increase in Pemex's employment—from 16,000 in 1937 to over 40,000 in 1958. As a government institution largely created out of the agitation of oil unions, Pemex has not been able to withstand labor's wage demands as well as privately operated industries.

Senor Gutierrez Roldan has vowed to eliminate corruption and unnecessary jobs created solely for political reasons. To demonstrate his good faith, he recently authorized the publication of examples of the kind of corruption he means to halt. Typical was the case of a group of employees in the town of Tampico who allowed valuable machinery to rust in the open air so that they could sell it to scrap deal-

ers and pocket part of the proceeds.

The new Pemex chief also announced a long-overdue schedule of price increases, effective from the date he took office, December 1. The new prices are generally held to be in line with world prices. They will, it is hoped, make Pemex's profits "comfortably" larger and permit greater self-financing of ambitious development programs. But unless Pemex can successfully shake off the natural handicaps under which government-owned industry must operate (particularly in an industry like oil, where the risk-taking element is so large) the average underfed, ill-housed and poorly schooled peon will have to pay ever-larger bills. Politicians will have a difficult time persuading him that the regulation of a privately owned industry would not, in the long run, have been easier and more beneficial to the nation than the radical solution decided on 21 years ago. ■

Vintage Oil

PETROLEUM IS STILL being formed slowly in the organic muds accumulating in ocean beds, particularly offshore from the mouths of great rivers. The process has been in operation for perhaps a billion years. The youngest petroleum now being produced comes from Pleistocene sediments which are about 10 million years old. Most of the more recent oils are of naphthene or mixed base and most of the older oils have a paraffin base. The time element is at least partially responsible for this difference, and it is suspected that petroleum may improve, as whiskey does, with the passage of time. But in the case of petroleum, millions of years are required for the process.

Challenge Interview

Q Dr. Brown, you are one of the country's foremost geochemists, yet you have become increasingly interested in the problems of people, of hunger and of resource allocation. Could you explain how in your mind you connect these two fields of interest?

A We live in an industrial society, and just as the body needs food, an industrial machine needs to be fed with raw materials. When the earth was formed, elements were concentrated in various places. Iron ore deposits were formed, as were deposits of bauxite, and so forth. The study of geochemistry enables us to understand just how these differentiation processes took place, and we can estimate the quantities of these resources which have been deposited. If we know something about the probable rate of consumption, we can attempt to estimate how long they will last.

Q Was there a particular personal experience which you might say acted as a catalyst to bring your scientific thinking to the social, economic and political implications of your particular specialty?

A Well, there were actually two catalysts. The first was my work on atomic bombs during the war; living with atomic bombs for several years makes one think and wonder about the future of our nation and of humanity. Shortly after the war, I had the opportunity to go to Jamaica, and there for the first time I saw starvation and a great deal of deprivation and misery. It dawned on me that this really was a world in microcosm. I realized that the problems faced by the Jamaicans were identical to the problems faced by the greater part of the world. My geochemical background helped me to think constructively, I hope, about these problems and to write about them.

Q Dr. Brown, you mentioned the island of Jamaica. Now, certainly the problems of this island, and of similar areas around the world, are not problems of an industrial society. How would you categorize some of these typical problems?

A First of all, we must recognize that we are living in an era of revolution, and that we are nearer to the beginning of that revolution than to its end. This revolution, in effect, consists of the growth and spread of modern industrial and technological societies throughout the world.

Thus far, certain aspects of industrial civilization have spread more rapidly than others; public health, for example. Life expectancy has increased enormously in various regions of the world, while birth rates have not decreased appreciably. The result is an enormous population upsurge. The over-all rate of increase is about 18 per cent per decade. I see no possibility of this leveling off to anything much less than about seven billion persons; and were it to level off there, we should consider ourselves fortunate. But it is not only in the so-called underdeveloped regions of the world that we are faced with these population upsurges. In the United States population is increasing at the rate of about 13 per cent per decade. I believe that our population will continue to rise until it approaches the population density which exists in Western Europe today. It could, of course, go even higher. But if it does reach that point, we will have approximately 900 million people in the United States.

Development rate must be greater than population growth

Q *In studying problems of world resource allocation, then, we begin with what has been termed the "population explosion." But such a population explosion affects the United States differently from an area like Jamaica, for example. Would you care to speculate on the nature of these different effects?*

A In underdeveloped areas, one is confronted with problems such as how rapidly can food production be increased; how rapidly can industrial growth take place. If food production increases two per cent a year, while population increases at the same rate, the passage of time produces an increase in population density, but not in standards of living. To improve the situation, development must take place at a rate greater than population growth. This can be done in either of two ways, or a combination of both. The rate of development can increase, or the rate of population growth can decrease. It is obvious that the rate of population growth is a key to many of the problems confronting underdeveloped areas.

Q *Could you give a concrete example of this?*

A Yes. The Rockefeller Foundation, in cooperation with the govern-

ment of Mexico, carried out a 20-year program to improve Mexican agriculture. This program was well conceived and well administered. New varieties of corn were introduced, people were taught how to grow more food, and it was made economically possible for people to use the fertilizers that were introduced. At the end of this period, food production had been increased substantially, but the population had grown to such a level that when the total amount of food was divided among the total number of people, everyone actually had less food than they had at the beginning of the program.

Economic development and the food problem

Q *We are now dealing with a basic resource—food: Will it be able to match increasing population? But in a more industrial economy, the revolution you spoke of involves resources other than food. What of these other resources?*

A You cannot divorce the problem of economic development from the problem of food. Let me give you a specific example. I spent several months in India, and worried while there about the problems of increasing Indian food production. It is amply clear that India could quite readily double its food production. Compare the food yields per acre in India with those in Japan. But how does one go about this doubling? Fertilizers, insecticides, pesticides of all sorts, and techniques of selection of crops, selection of seeds are involved among other things.

Q *Very little of which are presently available.*

A That's right. Now, how can we get fertilizers? From phosphate rock, which must be pulverized and treated with sulphuric acid. This, in turn, requires sulphur, and a factory for production of sulphur—which requires steel. Distribution of these products requires railroads and transportation systems. So, a nation like India must produce steel if it is going to increase its food production substantially. Thus, for the world to emerge as a full-blown industrial society, large quantities of steel, aluminum, sulphuric acid and other basic materials will be required.

Q *I suppose the rate of consumption of these materials in the United*

States gives us some idea of what is required for a decent standard of living.

A Of course. In the United States, to live at the level of living which we enjoy, we have in actual use, for every person in our country, about eight tons of steel, as well as hundreds of pounds of various other metals. In order to keep the whole system functioning, we consume energy at a rate equivalent to our burning about 10 tons of coal per year per person. It is a fairly good rule of thumb that in a modern industrial society it takes energy equivalent to about one ton of coal to keep one ton of steel in operation.

Drain on high-grade resources will increase markedly

Q *Any idea of what it would take to bring the whole world up to the Western level of industrialization?*

A It would take all the existing mines and factories in the world operating for a century in order to produce the necessary amounts of materials and capital. The per capita quantity of steel in use in India is measured not in tons but in terms of a few pounds. Tremendous quantities of steel are going to have to be produced, as well as varieties of other metals. Obviously, the drain upon high-grade resources is going to increase markedly.

Q *Will our present known resources be able to supply this need?*

A The answer to that requires a bit of explanation. When man first started to use tools, he was able to pick up pure crystals of copper ore, for example, from the surface of the ground. Those quickly became exhausted. He then had to dig into the ground in order to find his copper ore. The high-grade resources of copper ore, even when dug from the ground, were quickly exhausted. Around the turn of the century, we were processing copper ore that contained five per cent copper. Since then, it has gone down—four per cent, three per cent, two per cent, one per cent. We are now processing copper ore that contains only one half of one per cent copper. Processing half of one per cent copper ore requires a great deal of technology. It requires more machinery and more energy, with the result that for this reason alone, the per capita

quantities of materials in use are going to increase with time.

Q *Is it probable, then, that as more and more nations become industrialized, our high-grade ores will vanish and we will approach the time when there literally will not be any more ores available?*

A It is more than probable. But this doesn't mean that we shall starve; only that we shall have to apply an enormous amount of technology. Let us assume that there are no ores. Will man be able to get along? He will be able to get along simply by feeding his industry on ordinary rock. Rock contains all the elements needed to sustain a highly industrialized society. We have demonstrated here at the California Institute of Technology that you can process ordinary rock. We have demonstrated, for example, that a ton of average granite contains energy equivalent to about 50 tons of coal. In other words, once our industries are feeding upon ordinary rock, they will be able to extract the energy from the rock in order to keep the whole system going.

Trading one kind of capital for another

Q *This presents an interesting contradiction, to my untrained mind, at least. As we go along in this process of rapid industrial development, don't you believe that the more industrialized societies will be tapping the best of available resources? What will this do to the process of development of the relatively less-developed areas?*

A This depends entirely upon how the underdeveloped areas pace themselves. If these nations take the proceeds from their natural resources and convert them into capital for basic industries, then in effect they would be trading one kind of capital for another; and their development programs could proceed very nicely. I'm not too worried about stripping other nations of their resources, if development is carried out within an intelligent framework involving well-thought-out allocation objectives.

Q *There's something else that comes to mind. Is it possible in terms of resources, or even in terms of the demographic revolution, that things which we cannot predict today may come up to knock into a cocked hat everything that we expect to happen?*

A There are many technological innovations which cannot be predicted, but one can forecast the kinds of things that cannot happen. In other words, our world is governed by fairly well-known physical and biological laws, which cannot be violated. You can go through all sorts of permutations and combinations within the framework of these laws, but you cannot go outside of them. Now, let me give you an example. People have often asked me if my forecast of things to come would have been different if atomic energy had not been discovered. And I answer that it would have been essentially the same, except for the substitution of one form of power for another. In other words, 20 years ago I would have forecast the same kinds of things I am forecasting now, with the exception that then I would have said we will have to live eventually on solar energy.

Q *Do you believe that human demands could possibly consume the earth?*

A Well, this brings up the subject that I rather enjoy. There are many people who have implicit faith that science and technology will always come to our rescue. There are many people who are not worried about the fact that our population is increasing at the rate of 18 per cent per decade. Let us just examine what the consequences of that would be if this were to continue, and if we maintained our implicit faith. Now, at this rate, in 730 years the land area of the earth will be completely packed with human beings, with one square foot per person. Let us suppose, however, that science and technology come to our rescue somehow. Then it won't be very long before the earth as a whole will be completely covered, including all of the water areas, as well. So we learn how to process rock into tasty morsels, and we start eating our way down through the earth. In 1,700 years from now, which isn't a terribly long time, we will have achieved the satisfying goal of weighing as much as the earth itself. In other words, we will have consumed the earth.

Q *Is that the end?*

A Not quite. Science and technology come to our rescue, and we are able to process stellar radiation and radiations from the sun, and we

learn how to eat the sun. Thus, 2,400 years from now we will have come to another milestone; we will have completely consumed the sun. By that time, however, we have this large ball of humanity expanding at a prodigious clip. It is not until 5,300 years from now that we come to the ultimate obstacle. We will reach the point where science and technology can no longer save us because this ball of humanity will be expanding at the velocity of light. And we know from Einstein's theory of relativity that nothing can go faster than the velocity of light. So, I think you can see that there are limits. This is an extreme limit, obviously, but it is interesting, I think, that 5,300 years is no further in the future than the invention of agriculture is in the past, or the emergence of the great ancient civilizations.

Road to totalitarianism is a one-way street

Q Dr. Brown, I gather from your comments that the first step is to redress the balance between present human needs and the human capacity to make maximum use of resources. This suggests world economic development. What resource allocation policies would you recommend in terms of your experiences in Jamaica and India?

A Well, I believe that countries such as Jamaica, or much larger ones such as India, for that matter, are going to have a tremendous amount of difficulty lifting themselves up by their own bootstraps. I believe that outside capital is essential and that it must come from those countries of the world which are already developed and which have large productive capacities.

Q Do you feel we have a political stake in this, as well as an economic one?

A Yes. There are several things that worry me about the underdeveloped nations. Regimentation does appear to make for more rapid economic development, at least within our present framework. Modern science and technology have placed in the hands of rulers of nations weapons both of persuasion and coercion of unprecedented power. This means that the road toward totalitarianism today is really a one-way street. Once totalitarian power is achieved, it cannot be overthrown in the absence of some sort of forces operating from the outside.

Q *Well, Dr. Brown, are you saying that regimentation is solving the resource allocation problem in terms of rapid development?*

A That is correct. A recent step taken in the Soviet Union was a massive resources survey, attempting to pinpoint, among other things, just where future plants and railroad lines are to be established. China, too, is moving ahead rapidly. Such is not the case with India. Indian development plans have progressed very, very slowly.

Q *Would you say that the great East-West ideological struggle might very well be settled by the efficiency with which available resources are allocated for purposes of future possibilities?*

A Yes, that will certainly play a major part. But I think we have an effective answer in the present productive capacity of the United States. As you know, our agricultural productivity and our industrial productivity have been climbing very, very rapidly. Our productivity has been increasing at the rate of about 30 per cent per decade. This means in another 50 years it will be up at least a factor of four. If we are able to create a situation where war is not hanging over our heads, we are going to have an enormous amount of excess production potential in the United States. We ourselves are not going to be able to consume all of this; but we will be in a fantastic position to provide capital for the development of countries such as India. Even if we were to build machinery and give it to them with no thought of repayment, I believe it would make for a healthier economy in the United States than not to make use of our potential. At the same time, it would aid immeasurably in creating a world where people can lead free and abundant lives.

Q *Are you suggesting that this is one way we can defend ourselves against the political menace of planned economies? Is this one of our first lines of defense?*

A I would say this is our first line of defense, were we to have the imagination to carry out such a program.

Q *Do you believe that we are allocating our resources correctly? Are we producing the things that we should be producing?*

A No, I don't think we are producing the things we should be producing. Our automobile industry, for example, has enormous fluctuation

which is subject to whims of people. Unfortunately, our automobile manufacturers really think very, very little about the export market, about what the needs are. American automobiles are just not satisfactory for Indians, but I believe that we could produce a transportation unit of some sort that would be satisfactory to the Indians.

Q *This suggests to me that perhaps our capitalist, profit-motivated economic system may dig its own grave by its inability to assess the nature of the revolution that we are going through—the world revolution.*

A Not only the inability to assess it, but the apparent lack of willingness to look ahead. And by looking ahead I mean years and decades. Apparently leaders of American industry thus far have been reluctant to do this.

Q *In the area of free choice that we exercise as individual members of society—whether they be business decisions or political decisions—we have a certain element of disruption in the process of working together to do the best thing for the nation. Do you see in this any great potential design for the ultimate destruction of our society?*

A Well, I think that one thing is amply clear, and that is that modern industrial society as it now exists is extremely vulnerable to disruption.

A vast network of economic functions

Q *You mean whether it be free, or otherwise?*

A Whether it be free, or otherwise. Let's look at our own industrial complex. It is a vast network of mines, farms, distribution systems, factories, distribution outlets, and so forth, all interconnected. Anything that goes wrong in any one section of it affects the others. So, as this industrialization process goes on, the world as a whole will become increasingly vulnerable to disruption; and it will become increasingly important that disruptive influences such as nuclear war be avoided. Once the world as a whole is industrialized, should there be a major nuclear war, it could well mean that civilization as a whole would be wiped out. Were civilization as a whole to be wiped out, there is a very real chance that it could never get started again.

Q *Why not?*

A Civilization was made possible by, among other things, the fact

that high-grade ores were available. We were able to pick up copper ore off the ground, we had access to large quantities of iron ore, we were able to dig down just a few feet and find vast pools of petroleum. But we're approaching the time when these will be gone, as we have seen. So, man himself has been an enormous geologic force. He is eliminating the high-grade resources from the scene. Once they are eliminated, and should civilization be destroyed, the primitive men of the future would just not have the wherewithal to get started again. So it may well be that by carrying this whole process through to the ultimate, we are paving the way for our own extinction.

Q *But then you are suggesting that this may be the last species.*

A It is conceivable that it could be the last of what you might call species capable of powers of conceptual thought. But I would like to stress that I don't believe by any means that this is inevitable. I am confident that we can, if we apply our intelligence, create a world in which people can lead free and abundant lives on a near-perpetual basis.

Q *This suggests that in any war of the next 20 or 30 years, perhaps the less-industrialized societies will be the ones to inherit the earth.*

A It is conceivable, yes.

Q *What ultimate effects do you think such ideas as these might have on the future course of our foreign policy?*

A Well, one doesn't know, of course, but one would hope that we would adopt as an integral part of our foreign policy a two-pronged major program. The first would be aimed at reducing the possibilities of our getting involved in a major nuclear war with the Soviet Union, of decreasing the rate of spread of nuclear military technology to the rest of the world, and decreasing the emphasis that it is now necessary for us to place upon armaments. The second prong would be to transfer that released productive capacity to the production of capital goods which could be used to accelerate the economic development of those regions of the world which are attempting to develop within a democratic framework—or within the framework of a free society. I believe that both of these are essential, and they must be done in unison and harmony with each other.

Q *Thank you very much, Dr. Brown.* ■



An economist's foray into the nature of money
and the declining value thereof

by William H. Peterson

■ TEXTBOOKS on economics usually define money in terms of four functions: medium of exchange, unit of account, store of value and standard for credit transactions. Now, because of an economic law to be presented to the public for the first time, such a definition must be dismissed as ivory tower thinking—in the same vein as the business cycle theory that the raising and lowering of ladies' hemlines govern increases and decreases in economic activity.

What textbooks ought to say is: money is a medium of exchange if used *in increasing amounts*, a *diminishing* unit of account, a *shrinking* store of value and a *declining* standard for credit transactions. This definition is much the superior, for it ties money and inflation together, organically, as it

were, and realistically, as it is. Money is, after all, what money does.

Yet, most textbook writers treat inflation, if they treat it at all, as an afterthought in a separate chapter or perhaps in an appendix. To them it is a special condition, a phenomenon of the times, something which if condemned roundly and often enough will pass on and leave us be.

Perhaps the textbook writers have not been doing their history lesson as they should; or maybe they believe this is a dawn of a new day and human nature can be changed, and so-called "monetary stability" can be achieved. But history bespeaks of no such millennium in human affairs. History tells us money, in the long run, must increasingly be worth less,

buy less, store less and beget less credit.

Regardless of what finance ministers, central bankers and heads of state may say to the contrary, prices and the public debt will rise. Moreover, experience shows that the currency gymnastics of multiplication (more money) and division (less value) accelerate in direct proportion to the agitation against inflation, which increases in direct proportion to the size of the public debt.

The new scientific law at hand should prove of inestimable value in monetary and fiscal management, corporate accounting and economic calculation in general. With some deference to Sir Thomas Gresham (Gresham's Law: bad money drives good money out of circulation) and Prof. C. Northcote Parkinson (Parkinson's Law: bureaucracy tends to expand), this law is hereby launched, however immodestly, as Peterson's Law. To restate the law:

History shows that money will multiply in volume and divide in value over the long run. Or expressed differently, the purchasing power of currency will vary inversely with the magnitude of the public debt.

The reason for the law is quite simple. Wealth is money, it is reasoned; so multiply money and, presto, you multiply wealth. This

reasoning is most likely to manifest itself when complaints about a "shortage" of money—or of liquidity, to use the presently more sophisticated term—persists, and when national debts are at high levels. Peterson's law, then, has its roots in psychology, ergo, in human nature.

Empirical proof of the law is abundant. Take *any* currency of *any* era in the ancient, medieval and modern worlds, regardless of the political economy involved, and observe the inexorable monetary multiplication of volume and division of value over the years. Note, too, that the higher the public debt, the louder the condemnation of the process, the more persistently do price levels rise.

Examine the case of the English penny, originally struck of sterling silver. From 1275 to 1816, the weight of this coin dropped from 22 grains troy to 7.27 grains. Lest the reader suspect that silver is so inherently constricted in supply that its price would naturally rise with population growth, it should be noted that the London price of gold, from 1250 to 1950, rose from 17 shillings per fine ounce to 250 shillings per fine ounce.

Or look at the modern French franc. Between World War I and World War II it lost approximately 90 per cent of its value, and between World War II and the present it lost another 90 per cent.

(That is 180 per cent figured one way but 99 per cent figured another.)

Devaluations multiply not only currency but ciphers as well, which strain human calculations (e.g., 6,500 francs for a double room and bath at a good Parisian hotel; 14,000 francs for a night on the town). To ease the problem of astronomical arithmetic, the French government has thoughtfully issued a currency edict that, effective January 1, 1960, the last two zeros will be dropped from the stated value of all paper money in France, so the 100-franc note officially becomes—*voilà*—a “heavy” one-franc note, although it had been that in effect for quite some time.

Eroded by time

By now you may be getting the idea that public debts were made to be increased and currencies made to be devalued, and this is precisely the point of the law at hand. Consider: originally the pound, lira and peso referred to certain monetary weights; now all have been eroded by time, their original meanings lost in the dustbin of history.

Of course, there are some sustained periods of history when remarkable currency stability existed—for example, the French franc stayed put for 100 years, from 1814 to 1914; the Dutch guilder

did almost as well, surviving from 1816 to 1914; and the pound sterling persisted undisturbed from 1821 to 1914.

Such phenomena of currency stability are not to be construed as a flouting of Peterson's law. The 19th century was the century of the gold standard and witnessed little public debt and, therefore, precious little agitation and practically no countermeasures against inflation. Besides, the franc, guilder and pound eventually did come to a sorry pass. Peterson's law held all right.

Lost time made up

Moreover, since World War I and especially since World War II, monetary multiplication and division have made up for lost time. Dr. Franz Pick, the New York currency authority, finds that but 14 years after the end of World War II, only seven of the 85 currency units of the world have lasted more than 20 years without a legal devaluation. The average age of all currencies is a little more than seven years. Nineteen hundred and fifty-seven, for example, saw the official multiplication and division of the U.S.S.R. ruble, the Polish zloty, the Spanish peseta and the Ghana pound; 1958 the East German mark, the Egyptian pound, the Chilean peso, the New Taiwan dollar and, of course, that hardy perennial, the French franc (now

happily hardening under the fiscal sanity of De Gaulle). These, bear in mind, are the occasional *de jure* devaluations; the *de facto* devaluations go on continuously.

This, then, is an age of inflation. But what age wasn't? What age hasn't witnessed its currencies clipped on the Procrustean bed of Peterson's law? What is interesting about the moment of this age is the din of agitation and talk of countermeasures against inflation in the land of that Gibraltar of currencies—the U.S. dollar. The din bodes of ill for the monetary status quo.

Consider the Niagara of papers, pamphlets, books, public addresses, and newspaper and magazine articles and editorials on the subject of inflation-inflation-inflation, reiterated and reiterated until one's head begins to swim. Too, never has inflation been called by so many different names. But would not inflation under any other name be just as thorny?

Flight from the dollar

Meanwhile, with the deficit for the 1959 federal budget at roughly \$12 billion, the flight from the U.S. dollar is on. Gold outflow is at a record level since World War II—\$2.2 billion during 1958, with \$492,200,000 more through June 30, 1959. In 1958, for the first time in history, Congress *twice* raised the statutory debt limit in one year.

Still another raise was requested and granted in 1959. Increasingly the Treasury finds the public too wary to buy government long-term securities and is thereby forced to dispose of them at the commercial banks, which Chairman William McChesney Martin of the Federal Reserve Board declares to be "the high road of monetary inflation." Hedging against inflation is rampant. Workers and unions secure escalator clauses. Dow-Jones stock averages have hit new records. Farm acreage commands the richest prices in history. Some knowing buyers hedge with rare books and French post-Impressionist paintings. Saving atrocities, and the stock market and race track bustle, which probably account for Treasury Secretary Anderson's statement earlier this year, "If we ever reach the point where people believe that to speculate is safe but to save is to gamble, then we are indeed in trouble." A Toronto investment firm offers to hold gold bars for Americans as an inflation hedge (possession of gold, except in teeth, jewelry, etc., is illegal in the U.S.). Inflation has even hit crime. The Michigan legislature has raised from \$50 to \$100 the amount of money you must steal to commit a felony rather than a misdemeanor in that state.

Learned investigations and conferences on inflation mushroom,

and money is being studied as never before (presaging greater monetary multiplication and division, you may be sure).

It is the Temporary National Economic Committee of the 1930s all over again, and then some. Mountains of hearings, papers, findings and reports roll from the presses. Labor blames management. Management blames labor. Democrats blame Republicans. Republicans blame Democrats. The people blame government. Government blames the people.

How the investigations churn! Public tears are shed for inflation's "innocent victims." But as the late Prof. Sumner Slichter of Harvard, an enthusiast for "planned" inflation, noted in a Japanese publication, the *Nihon Keizai Shimbun* of Tokyo:

"Conspicuous by its absence is any protest against creeping inflation by the alleged victims. The people who are supposed to suffer from creeping inflation do not indulge in any of the customary methods of protest—they do not march on Washington, they do not picket the White House or the halls of Congress or the headquarters of trade unions. Their most conspicuous action is to vote for candidates whom President Eisenhower describes as 'spenders.'"

Still, Prof. Slichter's "alleged" victims could conceivably have been victimized, as trillions of dollars

in monetary claims—bonds, savings accounts, insurance policies, pensions, and so on, have gone down the drain of Peterson's Law during the past 20 years the world over.

Many Congressmen ask for stand-by price and wage controls and admonish the people with "moral suasion" to exercise restraint.

But Peterson's law, like the tide that wetted King Canute's feet, will prevail in the end. The investigations will go around in circles. The people will exercise no restraint. The government will exercise no restraint. The public debt, handmaiden to inflation, will wing onward and upward; prices and wages, with or without federal review, will continue to rise; money could continue to multiply in volume and divide in value. And as for the stand-by controls, if tried—well, no government with all its quite persuasive machinery of coercion, before or after Diocletian, has been able to fix the price of a loaf of bread.

Peterson's law is a purely scientific discovery—a fact of history, a part of human nature. Lorelei may be on the rocks, and our sailors are human. The law makes no moral judgments. It stands removed from politics. It poses no solutions. After all, it is not the business of the scientist to shut off the tap water. Enough for him to tell us the tub is overflowing. ■



Russia grants her satellites freedom to develop their national economies—but only in the context of bloc integration

by Nicolas Spulber

■ THE SOVIET top command has lately been displaying a new and warm solicitude for its East European satellites. East Germans have been the object of various flattering attentions at Geneva from solemn Mr. Gromyko, while jolly Mr. Khrushchev proclaimed *urbi et orbi* "eternal Russian friendship" (!?). Even little Albania has been gratified by a long *sejour* of Mr. Khrushchev and his top brass. Systematically the indefatigable "big brother" has toured his East European domain and delivered some long-winded speeches with very carefully adjusted passages for each social category's own aspirations and for each satellite's own national idiosyncrasies.

It is obvious that Soviet leaders intend to strengthen the "international personality" of each satellite and, in the process, consolidate the latter's "friendship" with the Soviet Union. Perhaps less obvious is the Russian attempt to bolster the "personality" of each satellite *within* the bloc, and thus increase each one's political "weight" in the inner councils of the Communist camp. What can be the immediate implications of this highly advertised turn of policy? What might be the long-range consequences for the East European satellites themselves and for the bloc as a whole? To answer these questions, let us examine briefly the nature and extent of the shifts in Soviet-satellite relations.

Stalin crushed East Europe immediately after the war in order to rebuild a Soviet "bastion" as fast as possible. He treated the area as conquered territory and had his troops carry away whatever movable goods they could lay their hands on. Then his technicians moved in and earmarked for "restitution" to the U.S.S.R. whatever they considered useful for Soviet reconstruction. Finally, his diplomats requested and obtained, over a period of six years, \$10 billion worth of goods from East Germany, \$300 million from Romania and \$200 million from Hungary, all goods to be valued at 1938 prices. Moreover, all the former German and Italian assets in the area were transferred to Soviet ownership. Soviet trade and banking agents then erected from these assets a network of "joint partnerships" which dominated key industries of the satellites and sapped their economic strength. Soviet imports from the area, in the form of reparations or as counterpart of the guaranteed "profits" of the joint companies, reached quite significant proportions during these early postwar years.

Crisis number one

This attempt at sacrificing entirely the national interests of each smaller East European country to the interests of the U.S.S.R. led finally to the first important crisis

of the Soviet bloc, the Soviet-Yugoslav dispute. The loss of Tito's Yugoslavia shook the Kremlin and led to the first broad policy revisions with respect to the satellites.

In 1948 the Russians halved the remaining reparation obligations and encouraged each satellite to draw its own long-term (five to six years) plan of economic development. Each satellite decided to reproduce, in miniature, the Soviet economy. Each earmarked for investment between a quarter and a third of its national income; of the total provided, half was to be machine construction and metalworking industries. Soon afterward, East Germany was officially converted from a Soviet occupation zone to an autonomous unit entering directly into both intra- and extrabloc economic transactions. Then China was conquered by the Communist armies, and a second center of gravity began to develop in the Communist bloc, around the newly rising star of Peiping.

The satellites' attempts to turn themselves into Soviet microcosms, whatever their natural resources or industrial potential might be, coincided with the deepening of the cleavage between East and West and the "compartmentalization" of trade in Europe. The policy of industrialization in each satellite, along with a growing Western trade embargo, made each of the

East European countries strongly dependent on imports of raw materials and foodstuffs from the Soviet Union, and on Soviet—and also Chinese—markets for their newly developing industries.

Ran into trouble

By the time of Stalin's death in March, 1953, the effort to industrialize each of the satellites on parallel lines was clearly running into serious trouble. Attempts to divert too large a share of the national output to nonconsumption (reparations, plus investment and military outlays) contributed in no mean measure to the first revolt in the area, the East Berlin uprising of June, 1953. The Soviet Union then agreed to dismantle the joint companies, but decided also to "sell them back" to the satellites, and at a good price. However, two new outbreaks—the Polish revolt in June, 1956 at Poznan and the Hungarian revolution in the fall of 1956—demonstrated that past policies had to be changed radically if the Soviet Union and Communist governments wished to avoid further trouble.

The consequences of the three upheavals were numerous. Not only did the Soviet Union cancel some of the debts incurred by the satellites in purchasing the joint companies, and reimburse Poland for the cheap coal deliveries of the past years, but it also agreed to extend

various sums of credit and technical assistance to East Germany, Poland and heavily shattered Hungary, the three rebellious countries.

Since 1956 there has been more talk than ever about "division of labor" in the orbit. Actually there are many snags in the way. Each East European country wishes, for its own reasons, to develop its own heavy industry branches, and to control as much as possible its own output plan and not to make it entirely dependent on the trade plans of others. As a result, while intra-bloc trade has been growing to substantial proportions since 1948, it has been deadlocked since 1957. The relative shares of bloc countries in each other's trade have tended to decline and the intrabloc market has tended to become glutted with the same type of products.

The Soviet Union remains key supplier and purchaser in the bloc; its output and trade plans inevitably exercise a serious impact on the output and trade plans of other bloc countries. This influence is the more decisive, since Russia supplies the most industrialized countries of the area with basic industrial raw materials—iron ore, coal and coke, oil—as well as with foodstuffs, and the least-developed countries with machines and equipment as well as with raw materials. The more ambitious the goals of

industrial development set by these countries are, the heavier their dependence on Soviet raw materials and the stronger their need for developing marginal extractive industries—even in the least-endowed satellites.

Considering, on the one hand, the former relationships between Russia and her satellites and, on the other hand, the increasing importance of the Soviet Union as a supplier of key raw materials, purveyor of credits and technical and scientific assistance (notably in the atomic field), some Western observers have suggested that the satellites may actually have become an economic "liability" instead of an asset for the Russians. But the truth is that Russia receives from the satellites a large and varied flow of fully equipped plants, machinery and equipment (mostly from Germany and Czechoslovakia), and of industrial goods, raw materials and processed foods from the area as a whole.

Bilateral agreements

Considering the fact that all bloc trade continues to be carried out through bilateral agreements, on the alleged basis of "international prices," some other Western economists have suggested that Russia finds herself in an excellent position to exploit the satellites by way of "trade"; namely, by charging high prices for her exports and by

paying low prices for her imports. It does appear, on the basis of available data, that prices used in bloc trade, though fixed through bilateral agreements, do vary considerably from country to country and reflect the bargaining strength of the respective partners. However, it is somewhat doubtful that prices are systematically slanted in favor of Russia. In fact, each satellite may enjoy in respect to various commodities a "monopoly" position and "exploitation" of the bloc may not be due to the Russians alone. The available data does suggest that prices charged by the Russians to their bloc partners are higher than those charged to non-bloc countries. However, it is possible that some of these higher prices have been offset by compensatory deviation in prices paid by Russia for imports from the area. Thus, the whole East European trading price structure might be inflated as related to the world market.

Within the bloc the most important traders are, after the Soviet Union, East Germany and Red China, followed by Czechoslovakia and Poland. Total trade turnover (imports plus exports) in 1958 of the Soviet Union and East Germany reached 33.3 billion and 14.3 billion rubles respectively and together made up more than half of the total bloc trade. At the official rate of exchange of four rubles to

the dollar, East Germany's total trade turnover amounted to some \$3.6 billion as against \$3 billion for Communist China, \$2.9 billion for Czechoslovakia and \$2.2 billion for Poland. East Germany is the key industrial satellite with more than 60 per cent of her exports consisting of machinery and equipment and an additional 20 per cent made up by industrial consumer goods. In the case of the second most industrialized satellite, Czechoslovakia, 43 per cent of her exports are made up by machinery and equipment; the percentage falls to 35 per cent for Hungary, 27 per cent for Poland and to less than 15 per cent for all others.

Bitter experiences

No satellite today fancies itself entirely able to become a perfect Soviet economic microcosm; bitter experiences have been encountered on this road. Today, while each government wishes to keep the full control of its output and trade plans, a limited apportioning of technical skills is attempted in the bloc. This limited division of labor is hammered out within a Council of Economic Mutual Assistance (CEMA) in which only the Soviet Union and her East European satellites participate directly, while Red China and her Asiatic retinue are accepted only as observers. CEMA agreements have been

reached for specialization with respect to the manufacture of such products as certain steel sections, trucks, plastics, chemical fibers, mineral fertilizers and other products.

While the words "bloc-wide integration" have been used and abused in order to describe such processes, it may be useful to note that this coordination is still limited to specific outputs, while the development of the individual branches of each economy is still dependent on investable resources remaining in the country for investment. While the prospect is for an increasing amount of planned apportionment within the bloc of various types of manufactured products, emphasis on heavy industry and the distorted price system prevailing within each country provide an extremely unreliable guide to a broad and economically meaningful area division of labor.

Quite apart from prestige and power, Russia needs East Europe economically for the fulfillment of her Seven-Year Plan and for her ambitious race with the United States. Russia needs above all a *stable and reliable* East Europe, and not a turbulent one, shaken within the brief span of three years (1953-56) by three bloody upheavals which, by the way, threw out of gear all the then prevailing plans. Hence the desire of the Soviet leadership to strengthen

local governments, bolster their international "personality" and soothe their national pride.

But, more than that, Russia now needs, also within the inner councils of the bloc itself, some sort of *countervailing power* to the rising importance of China. The Russians may thus need to strengthen the role of each satellite within the bloc, and this, among other things, may account for the elaborate attention given now to even the smallest and weakest of the lot, backward Albania. To be sure, bolstering the political "personality" of each satellite may not change ultimately the actual relationship of forces among them. However, this may modify deeply the day-to-day policy-making in the bloc as a whole. The satellites seem to be in line now for a mild "emancipation," for a sort of release from the watchful "paternal" interference of the Soviet Union, precisely because the latter needs their "personality" both in and outside the bloc.

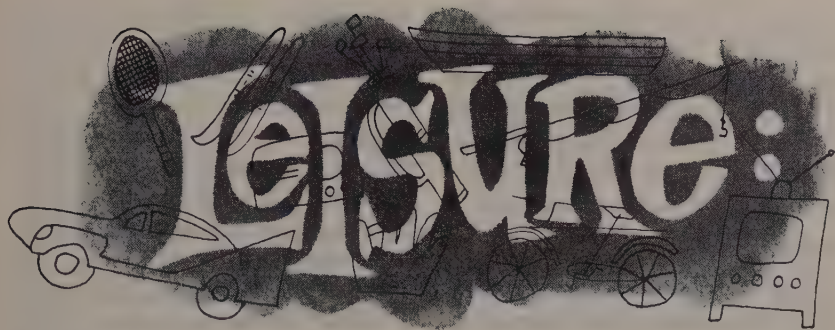
After all, Mr. Gromyko might have had to listen at Geneva to

Mr. Bolz more than he would really have liked to. Thus, perhaps both sides now have to pay equal attention to their "own" Germans. The consolidation of East Germany, the timing of the fight for West Berlin and various other policies do not arise solely from Soviet interests in East Germany. These policies express, also, the increasing influence of East Germany in matters relating to bloc positions toward the West in general and unification of Germany in particular.

This mild "emancipation" of the satellites may be easily derided by some as "insignificant" since the Soviet Union would always be ready to intervene brutally if the need arose, in order to prevent things from getting "out of hand." However, one may note realistically that such "emancipation" may open new possibilities for inserting Western diplomatic forces into an area which seemed, not long ago, entirely closed to any outside "interference." It would perhaps be erroneous to overlook entirely the deep-changing currents remolding the Soviet bloc. ■

Golden Ring for a Rocket

MOST GOLD used in jewelry is 18 karat, or 75 per cent gold to which copper or another hardening agent has been added. Commercially pure gold, such as is used by the United States Mint, is of the 24-karat variety and can contain 0.5 per cent impurities. The purest gold now available is used in slip-ring assemblies for rocket controls. The metal is over 99.99 per cent pure and will not tarnish or form surface impurities. The golden rings used in the rockets are three times the hardness of 24-karat gold.



an economic fact of life

**Leisure needs have become so pervasive that they no longer
can be distinguished from the general consumer market**

by Raymond D. Buteux

■ ONE OF THE MOST economically significant developments in this country since World War II has been the vast increase in importance of leisure time activities. Providing the products and services to satisfy these leisure needs has opened new industries and created jobs for millions of people.

Today, 40.2 per cent of personal consumption expenditures is devoted to needs other than food, clothing, housing and fuel. With this increased amount of money available for nonsubsistence needs, it is obvious that there is also more money available for leisure. If industry is to expand to meet the demands of this new leisure market, it is essential that better

understanding of the nature of the market be developed.

The leisure market has come about primarily as the result of a series of developments: automation and increases in factory and home efficiency have given the average consumer more "free" hours than ever before; the average work week has declined since World War I from 51.5 hours to approximately 40 hours; and paid vacations and compulsory retirement plans have added to the total of free time available to the average consumer.

But, if time were the only consideration in leisure activities, the leisure market would be associated with product purchases to pass the

"unproductive hours" as pleasantly as possible. The marketer's efforts would be directed toward the development of innovations designed to capture the mass fancy. This is, in fact, what the marketer has done up to now.

A way of life

As important an influence on the leisure market as time, however, is the fact that, in American social habits today, leisure time is becoming a *way of life*. How else can one explain the recreation room as the focal point of activity in the suburban home, the increasing sales of such diverse goods as organs, camping equipment, boats and outboard motors, and even second or "summer" homes in the country?

To better understand these purchasing habits, one must realize first of all that discretionary spending can no longer be realistically subdivided into leisure and nonleisure expenditures. The two types of spending are rapidly assuming a common identity. Secondly, a simple increase in time available for leisure cannot completely explain the growth of the leisure market.

The leisure market is, of course, a part of the mass market, and herein may perhaps be found another key to its understanding. Today more than 64 per cent of the consumers in the "mass market"

have family incomes greater than \$4,000, and it is this group which accounts for the bulk of leisure dollar expenditures.

Economists have demonstrated that as income rises, the proportion spent for "nonessentials" increases, while the proportion spent on necessities decreases. The "non-essential" spending as a percentage of total consumer expenditures has grown to almost one half of the personal income in 1958, with some estimates placing the 1958 figure as high as 75 per cent.

But simply having more money than ever before and more time in which to enjoy life is no guarantee that such expenditures will take place. There are, after all, alternatives such as saving and investment. In order to understand fully the new leisure market we must turn to the social scientist, particularly the sociologist and the social psychologist. The evidence which they have developed provides convincing proof that a whole new generation of consumers is coming into being—consumers who have at their disposal unprecedented sums for discretionary spending.

This generation's approach to living, saving and spending differs radically from that of the prewar consumer, who thought and bought primarily in terms of necessity.

A brief consideration of three specific differences will place the modern consumer in proper focus.

The first two are concerned with attitudes; the third involves motivation. All three are clearly interdependent.

The first element to consider is the modern consumer's attitude toward saving. The change which has taken place in this area can best be summed up by rephrasing an old maxim. Whereas past generations "saved for a rainy day," the present generation "saves for a sunny day." This is far more than a play on words because it reflects the new consumer's feeling of optimism. This generation, after all, has never known a serious depression. Instead, it has seen a constant improvement in business, which has meant constantly rising incomes.

Fringe benefits

This has also been a generation in which "fringe benefits" of all kinds have emerged. Social security, unemployment insurance, pension plans and package insurance programs are designed to meet almost any emergency. Is it so strange, then, that consumers should get the idea that others are taking care of the saving for them, leaving them free to spend what is left? It should not be assumed from this that the modern consumer does not save. To the contrary, personal savings are close to an all-time high. The difference between old and new saving habits,

however, lies in the fact that the new consumer usually saves in anticipation of some definite expenditure, and when the time comes to make the purchase, the money will be spent almost without a qualm.

The second point to consider is the new consumer's attitude toward spending. In the past, spending for anything other than necessities was generally regarded as a wasteful dissipation of resources. The modern consumer, on the other hand, generally looks upon spending of this kind as an essential investment in living. The dominant force is the desire to enjoy life now rather than in some hazy future.

There is widespread confidence that the economic climate will continue at favorable levels, and this confidence finds expression in the sentiment that today is good and tomorrow will be better.

There is a third element which must be considered in understanding the new consumer. Formerly, individuals looked to their parents for a guide to living and tended to follow rather closely the pattern of living which the parents had established. Today's consumer is drawing further and further away from this parental direction.

He is beginning to look to the friends and neighbors in his peer group for support and even social approval of his philosophy of life. The peer group also functions in another important respect. Not

only does it support the consumer by encouraging him in his spending, but it also helps him solve the problem of choice. Choice is, after all, a factor to reckon with in an economy of abundance. With the wide latitude which his discretionary income permits him, the consumer has almost unlimited alternatives, none of which can truly be said to be essential to life. The problems involved in making the decision as to how best to spend his money can well be more vexing than the problems associated with earning the money in the first place. Then, too, there is the fact that as the consumer progresses higher and higher above the subsistence level, goods are purchased less for their utility value and more for their psychological value.

Increasingly, purchases are made to reflect the image which the consumer holds of himself and, of equal importance, which he wants others to hold of him. Consider, for example, the contribution of station wagons, sports cars, elaborate barbecue equipment and all the other paraphernalia of suburbia.

Since a person's peer group is made up, in large part, of people whom he has consciously and voluntarily selected, it is only logical to expect that he would try to conform to the group pattern, even to the extent of attempting to emulate the members of the group in their purchases. This involves both

purchasing the goods which are acceptable and refraining from purchases which the group, for one reason or another, rejects.

Market dimensions

Time, money and motivation—these are the dimensions of the leisure market which a marketer must understand. But what influence will they have on the expenditure of leisure dollars? The influence will be felt in many ways, but three stand out as particularly relevant.

- The consumer will become more selective in his buying. He will want specialized rather than standardized products; products that help set him apart not just as an affluent buyer, but as a discriminating one as well. This desire for exclusiveness may manifest itself in a number of ways, from the purchase of a monogrammed sport shirt to a custom-built swimming pool.

- Single purchases may well represent sizable sums of money. As leisure activities increasingly become a way of life, leisure purchases become all the more difficult to segregate from what the consumer considers as living expenses. Is the second car a luxury, or does it fill a necessary role in the family's transportation needs? As for the summer home which the family buys, it is not difficult for them to agree that a vacation is a necessity

and that owning their own home in the country is not so much an expense as it is an investment in living. With the ready availability of credit and mortgage money, purchases are not measured in terms of total price nearly so much as they are measured in terms of monthly payments. This makes the expenditure not only more palatable but easier to justify as well.

•Services will become increasingly important. It is in the service sector that some economists expect the sharpest upturn to occur. In the areas of education and entertainment, the beginnings of a high level of activity are already evident. Adult education courses in everything from oil painting to antique refinishing are chalking up record enrollments. In the entertainment sphere, the consumer watches television—still a major leisure time activity—but he also listens to hi-fi, attends concerts,

reads, and entertains friends. He participates in civic affairs, engages in “do-it-yourself” projects and still finds time for extensive travel both on weekends and during vacations.

How can the marketer capitalize on the new leisure market? Although there will always be room for something new or novel—a new card game or board game, for example—long-run successes will only be achieved by the marketer who is geared to the new leisure. This involves an understanding both of the consumer and of how to reach him.

A great deal of research remains to be done in further defining the leisure market and in sharpening the marketing tools that will be required to develop it. However, the evidence is clear: the leisure market, in size and importance, may well be beyond anything that we have yet seen. ■

Spending at Home and Abroad

A U.S. DEPARTMENT OF COMMERCE study of the changing use of family income reveals some interesting trends:

•As total family income increases, housing and fuel constitute a decreasing percentage of total expenditures, and this despite the tendency to move to a larger home in a more expensive neighborhood. At the same time, the costs of household operation increase as income increases, largely because of higher maintenance costs.

•Foreign travel accounted for one per cent of total consumer expenditures in 1929; but in 1957 for only 0.9 per cent, despite a threefold increase in the total dollar amount spent on foreign travel. This reflects the great increases in personal income, the high exchange value of the dollar, and cheaper transportation facilities (tourist class and economy class) which make it possible for a greater number of Americans to travel abroad.



**steel
impasse**

The future of the economy in the next few months will depend on just how soon, and under what conditions, the steel strike is settled. An 80-day injunction under the Taft-Hartley Act is at best only a temporary solution and may stiffen union resistance to any compromise plan the Eisenhower Administration may ultimately propound.

**strike
effects**

An injunction, however, will enable the automotive industry to replenish its rapidly dwindling steel stockpiles. The direct effects on other industries are relatively mild thus far and are confined to coal and iron ore production, and freight. Late August and early September saw a further decline in industrial output and employment levels, which can be attributed to the spreading consequences of the strike. Industrial production declined three per cent in August to 149 per cent of the 1947-49 average, as compared with 153 per cent in July and a peak of 155 per cent in June.

**the labor
force**

Seasonally adjusted employment in nonfarm establishments decreased about one-half million to 52 million in mid-August largely as a result of the steel strike. The effects of the strike were offset partly by employment rises in construction, trade, finance, and state and local government. Earnings of factory work-

ers, reflecting the strikes and layoffs in the higher-paid manufacturing industries, declined somewhat. A decrease in unemployment by about 320,000 brought this figure down to 3.4 million. This decrease was less than the usual seasonal average, raising the seasonally adjusted unemployment rate from 5.1 per cent in July to 5.5 per cent in August.

tight money

The already tight money situation was made even tighter by the government's issuance of a new 58-month note at a five per cent interest rate. The government has not paid this much for money since 1929. The Treasury is trying to encourage small investors with this issue and has promised that all orders for \$25,000 or less will be filled in full. Another indication of the increasing demand for money was that most New York City savings banks raised their interest rates to three and one-half per cent for the last quarter, while many savings and loan associations went to three and three-fourths per cent. In spite of the increasing cost of money, there was a continually increasing demand for business loans and consumer credit. Installment buyers will receive an increasing share of the loanable funds since the interest rates on installment buying are usually larger than those on ordinary business loans.

the future

The immediate economic future, in spite of the steel strike and the recent decline in the price of common stocks, appears to be one of high prosperity combined with increasing inflationary pressures. A steel settlement, which will undoubtedly include some form of wage increase, will unleash a pent-up demand for steel and steel products. This, in conjunction with a high rate of employment and an increasing demand for business and consumer loans, certainly points to a continuation of the inflationary trend which has marked the United States economy since the end of World War II. ■



No. 19: the disillusioning complexities of a postwar world inspire a longing for a "return to normalcy"

■ THE "RETURN TO NORMALCY" in the 1920s, though it was in fact far from that, was a product of many developments on the American scene—political, economic and social.

Some have ascribed the reversion from progressivism and social reform in part to the usual letdown after a war; while others have held responsible the equally recurrent American experience of general prosperity during and after recent wars.

But deeper historic currents account for national behavior after World War I. The period represented the first massive involvement of American moral fervor with modern war and overseas commercial rivalries. We emerged embittered against the international complexities that were producing a disillusioning peace. Achievement of the main progressive goals of

greater democracy and a stronger federal government was turning out to be a hollow victory.

The nation had not yet digested the many conflicts connected with immigration and with its markedly greater urban and industrial status. Reconversion of the vast military and industrial apparatus of war appeared at first to be going unexpectedly well. Virtually full employment continued through 1919. The 600,000 unemployed in 1920, out of a total labor force of about 42 million, ranked well below the prewar average.

But this was a fortuitous rather than planned result. Federal spending tumbled sharply, but the effects of this drop and of accumulating troubles in the farm sector

This is the 19th article of a series in CHALLENGE which deals with the history and development of the United States economy.

were hidden by the buoyancy of exports to Europe and expansion in civilian industries.

Along with unsettled issues as to the role of government, there was a lack of precedent for so profound a demobilization. Liquidation of the wartime administrative organizations took place rather hastily and with some intricate confusion. With the rapid lifting of controls, wholesale and consumer prices persisted toward their 1920 peaks of more than double prewar levels.

Remnants of the agrarian and populist groups joined with labor to demand that the railroads be retained under government ownership and operation. The 1920 Esch-Cummins Railroad Transportation Act provided increased regulation, along with increased subsidies, in returning the railroads to private hands.

In this sense, the much-vaunted "return to normalcy" took a significantly different form than the *laissez faire* of the McKinley era. Businessmen and the general public had become accustomed to a concentration of power in Washington. The subtle but definite new approach was not so much to dismantle this power as to infiltrate and adapt it to the ends of one's own pressure group. The conservative administrations of the Twenties abolished none of the regulatory commissions but instead staffed the commissions, the anti-

trust enforcement division and the courts with men sympathetic to corporations. Business was more immune than ever.

Business experience with the immense outpouring of statistics and regulations under the largely business-staffed World War I agencies had likewise shown certain advantages of large-scale control. The result was a renewed wave of corporate mergers, holding companies, market pools, fiduciary abuses and industrial codes that helped set the stage for the speculative boom and bust of the later Twenties. This tradition persisted and was to become part of the N.R.A. episode of the New Deal.

There was also an increasing shift of power away from the older, reputedly more high-minded or noblesse oblige type of conservatives who still commanded some cabinet and business positions. In their places were rising a newer breed of more rank opportunists, who accounted, for example, for the shocking scandals unearthed from the surface respectability of the Harding Administration.

Labor tried its own forms of group action, but with considerably less success. Employers no longer encountered a production-conscious wartime government which had successfully encouraged collective bargaining. They began to resist further cost-of-living increases quite firmly. Several thousand bit-

ter strikes erupted throughout 1919, involving more than four million workers in steel, coal and almost every other major industry.

Certain minorities among the workers and agrarians were of a definitely leftist persuasion, going far beyond the immediate wages-and-hours issues. Frightened by the Bolshevik revolution and other radical developments in Europe and at home, business and national leaders seized the occasion for a gigantic anti-Red campaign. It covered all sorts of labor leaders and workers, intellectuals, farmers, magazines and civic organizations.

Spectacular rescue

Strikes were broken by injunctions, nonunion labor and other legal and illegal tactics. Though bolstered by the conservative unionism of the skilled trades, union membership and militancy drifted downward throughout the Twenties.

American agriculture had been rescued spectacularly by the governmentally guaranteed boom markets of the war years and the immediate postwar shortages at home and abroad. Wheat acreage was the most striking example, having risen 66 per cent between 1917 and 1919. Prices received by farmers more than kept pace with rising living costs and spurred a round of speculative mortgaging that bid up land prices even more. Mechaniza-

tion was beginning to increase farm productivity. Farmers were thus vulnerable when European agriculture recovered in 1920.

Farm prices slumped disastrously, dropping almost 50 per cent by 1921. Like the businessmen, leaders of the farm organizations had come to appreciate in peacetime what government aid had done for them during the war. They revived the traditional farmer resort to Congress via the creation of a bipartisan "farm bloc." But, in the main, the farm groups were too weak to wield much countervailing power.

With rural purchasing power curtailed and the first postwar shortages satisfied, general economic activity began to sag in 1920. It dropped sharply in 1921, bringing unemployment to almost five million people and throwing 100,000 firms into bankruptcy.

Outside of agriculture, the 1921 depression proved quite short. The business recovery was due to the natural resiliency of the economy rather than to any policy measures. A considerable degree of downward price flexibility, rarely apparent in the years since, helped restore consumer buying and business confidence almost within the year. Then began the era of "Coolidge prosperity."

In its broad statistics, the prosperity was real enough. Industrial production rose more than 25 per

cent; national income almost as much; and per capita real income by perhaps 13 per cent. The enormous expansion of the automobile industry stimulated a host of related industries. Electric power and the urban use of electrical appliances grew. Construction boomed. Farm mechanization increased, even through the prolonged agricultural depression.

Internal contradictions

Yet internal contradictions were accumulating. In manufacturing, for example, man-hour productivity rose almost 32 per cent between 1923 and 1929, while hourly wages increased by a mere eight per cent. In the increasingly monopolistic economy, prices failed to drop in reaction to the greater productivity. Thus, total profits rose more than 80 per cent during the decade.

Tax revisions under the millionaire Treasury Secretary Andrew Mellon provided further windfalls for the wealthy. A Brookings Institution study showed that by 1929 about 60 per cent of American families had annual incomes of less than the \$2,000 estimated as required for basic necessities. The 60,000 highest-income families accounted for about as much as *25 million* of the poorest families.

Arthur Schlesinger, Jr., among others, has traced the final dynamics involved. High profits begat higher securities prices. These

eased new corporate security financing. The proceeds either flooded still more goods into the market or went toward speculation. Stock prices rose again. Federal Reserve policy, although partly in legitimate response to international needs, piled more easy money into the economy. Given these cumulating structural weaknesses, what might happen if ever some of the booming industries leveled off? Few people wondered—until 1929.

International trade and finance presented other important contradictions in the economic policies of the Twenties. Political isolationism coincided with concessions to domestic pressure groups to produce an exceptionally restrictive tariff policy.

Various provisions of the Versailles Treaty and limitations on the League of Nations hindered a viable postwar economy. The crucial factor, however, was the emergence of the United States as a net international creditor. Repayment of the more than \$10 billion of war debts, let alone full European recovery, hinged on U.S. willingness to support a long-term net inflow of goods and services. Exactly the opposite happened.

Interests representing the bountiful produce of American farm and factory sought and gained increased export channels and protection from import competition.

Massive long-term private investment overseas allowed this hazy economics of neomercantilism to operate through the decade, but with increasing difficulty. Here too a crisis was being hatched.

The United States in the 1920s, then, was undergoing a "return to normalcy" only if one meant by the term more grossly unequal distribution of wealth and power. Otherwise, there was really no normalcy to which to return.

We were now inextricably tied to world trade patterns, whether we liked it or not. Our expanded and mechanized agriculture could not revert to earlier levels of production or survive a sharp return to a free market. The urban population had surpassed the rural for the first time in the 1920 Census. Irreversible new demands were arising with the revolutions in mass production and communications. Large-scale organization was becoming the mode throughout the economy. The bally-hooed budget surpluses of the passive Coolidge Administration could not conceal federal expenditures consistently more than four times above prewar levels.

"Europe was devastated by war," said Justice Brandeis, "we by the aftermath." Yet even at its lowest ebb the permanent frontier that is American society held hope for the future. Many of the eco-

nomic accomplishments of the Twenties represented a genuine breakthrough to new levels of production and popular consumption. Economic opportunity and social mobility became rigid but remained high and flexible by the standards of most societies. Much of the outside world praised the American accomplishments.

The experiences of the 1920s helped many of the same generation to face the stresses of the following depression and war with significantly greater maturity.

Fascinating for its splendid ironies, the "normalcy" of the Twenties also bred the roots of many present-day institutions and problems. In this decade, especially, there arose such naggingly current issues as business concentrations with ownership divorced from control; mass markets and the Organization Man; urban and suburban growth; pressure groups and Big Government; wages, prices and inflation; international cooperation and relations; and the optimum use of resources in an affluent society.

Why then does this period, not really so remote in time, appear so strange in retrospect? The answer may be that this "era of wonderful nonsense" was—in the words of another contemporary observer—"the Indian summer of the old order. ■

NEXT MONTH: the artificial boom of the Twenties



A REALISTIC PROGRAM FOR WATER ALLOCATION

by Eli Schwartz

■ AS THE population of the United States increases, we face a growing problem in the rational allocation of common natural resources. Technically, economists consider such resources as either goods whose consumption involves interrelated utility functions, or goods which are produced or gathered under conditions of joint or common costs. Air (if it is subject to pollution), water and land, in its wider uses, fit into this category since they are all subject to joint use, and since the manner in which they are used by one person or class of users can directly affect the well-being of many others. Although all these common resources are important, the mounting scarcity of water is beginning to present an economic problem which may be with us for some time.

A satisfactory allocation of water use cannot be left to the market system. For example, the use of water to dispose of waste material may be perfectly feasible and economical as far as the individual plant or community may be concerned, but it creates a hardship for those who would like to use the water for recreational purposes, drink it, or use it for certain industrial purposes downstream. Furthermore, water is difficult to apportion among competing uses. The maximum use of water for irrigation sometimes precludes the maximum output for power. Both of these uses may prevent the maximum control of the water flow for purposes of flood prevention. Moreover, there is the competition between areas and industries over the allocation of the water supply from

a given watershed. Although market price and cost data will be needed to provide a rational solution, the final decision on allocation and control of water resources will have to be made by authorities outside the market system.

Let us explore further the problem of the utilization of our water resources. The basic and most obvious factor is the trend of our population growth. As of this date our population numbers more than 170 million; it is quite probable it will reach over 220 million by 1975. If present trends continue, some 80 per cent of this increase will be absorbed in metropolitan areas. A large part of this metropolitan population growth will be suburban, with a resulting heavy demand for water for lawns and shrubs, and for use in washing machines, dishwashers and air conditioners. Moreover, the growth of population within the metropolitan areas can lead to an increase in pollution which subtracts from the available supply of usable water.

Supplemental irrigation

Continued industrial growth will demand increasing quantities of water. Water usage for irrigation on arid land may not rise appreciably, but there is a growing demand for supplemental irrigation—especially for use in truck farming, a great part of which is carried out within the metropolitan areas.

Exact data in this field are hard to obtain, but daily per capita water use runs to about 1,200 gallons a day. At present our total consumption in all uses is approximately 200 billion gallons per day. If we take the population estimate of 220 million by 1975, then our water needs may well run 400 billion gallons a day about 20 years from now. The average daily rainfall in the U.S. produces a gross amount of approximately 4.3 trillion gallons a day. Of the total rainfall, about 70 per cent, or approximately three trillion gallons, goes back into the atmosphere by transpiration (plant use) or evaporation, leaving some 1.3 trillion gallons daily to enter the ground water and the surface streams—the gross usable supply of water. At present then our daily use of 200 billion gallons constitutes slightly more than 15 per cent of the maximum available supply. By 1975 we shall be drawing on about 30 per cent of the estimated natural supply.

The use of 30 per cent of our potential water resources does not, at first glance, seem to constitute much of a burden. After all, 70 per cent of our available supply will still go unutilized for direct consumption and in a sense may be considered a reserve. However, this notion neglects the seasonal and erratic nature of rainfall, and the fact that rainfall patterns vary

geographically; supplies and use, resource and population are not always in balance. Some regions of the country are even now in a deficit position and are "mining" the groundwater supply. In these areas the tapping of groundwater through wells is greater than the infiltration of new water; the result is ever lower water levels, mounting costs, and often a ruination of the groundwater supply by the consequent invasion of brackish or salt water.

Problem of reuse

On the plus side of the ledger is the fact that not all of the water drawn out of the available supply (200 billion gallons a day at present) is completely lost. Some of it flows back into the streams and rivers and can be used again. This, however, depends upon the condition of the water when it is released. If the water is reasonably clean and purified, natural processes can render it fit for use again. On the other hand, if the released water is highly contaminated or if the amount of polluted water fed back is too concentrated in a given waterway, then not only is the used water unfit for further consumption, but by its presence it ruins and destroys the economic value of the waters which it enters. This then is the nature of the pollution problem. The problem of conserving and using common re-

sources is not insurmountable, but it does demand planning, forethought and the investment of capital now in anticipation of future needs. Some general guide lines can be laid for approaching a solution.

Most importantly, although there has been considerable planning for the large river basin developments, the development and needs of the smaller watersheds and regions have not been given sufficient attention and forethought. A great deal more could be accomplished if additional funds were made available for planning and if the work were put on a more professional basis.

Much of the water allocation problem is regional and local and should be studied and resolved on this basis. Surveys should be made of the recurrent annual water supply, with the different sources graded as to quality (usability for different purposes), and the cost of obtaining the water. Against this supply picture should be projected the pattern of future needs. These needs should not fail to include the intangible but highly productive use of natural water in providing recreational activities. As a matter of fact, the growing population density will raise the economic priority of recreation. Whenever possible, water resources should be subject to multiple use; there is reason to believe that multiple use for swimming, boating, etc., and

for domestic use is much more compatible than before.

The total of anticipated use should be reconciled with the available continuous supply. The water needs of competing communities will have to be accommodated. A start should be made toward upgrading those sources of supply where a condition of pollution makes them unfit at present for higher use. A great deal of data on the extent of pollution is lacking; and certainly we have no notion of the full cost of pollution, not only as a destroyer of water supplies, but also as a depreciator of land values. Whenever the total costs of pollution exceeds treatment costs, then pollution control is economically justified. It would help to curb pollution if waste outlets were metered and if the discharge of contaminated waters were taxed both as to quantity and by type according to the difficulties of treatment.

Lastly comes the problem of how to set the water charges for various types of water use. Once a water project has been set up, the rates should encourage maximum

use of the annual flow, but rates should not be set so low as to accelerate the necessity of developing new and perhaps lower grade sources. In any case, a minimum amount of water for domestic use should be charged for at a fixed rate so as to encourage sufficient domestic use per household to insure basic standards of health and sanitation. Beyond this minimum amount the charge should be variable or metered to discourage waste. In industrial or commercial uses the minimum should be set much lower, relative to total use.

All these notions are merely suggestive. At the moment both the theoretical framework and the available data are not quite adequate to solve the problem of arriving at an optimum allocation. But the difficulty of the problem only makes it more urgent that we make a real start toward its solution, area by area, region by region. If we do not, there is a real possibility that our potential economic growth will eventually be stunted and, that the living conditions for a large part of our future population will be suboptimum. ■

Answers to Challenge Quiz

(see page 79)

- | | |
|----------------------------------|-----------------------------------|
| (1) True (<i>see page 37</i>) | (7) False (<i>see page 29</i>) |
| (2) True (<i>see page 45</i>) | (8) True (<i>see page 65</i>) |
| (3) False (<i>see page 53</i>) | (9) True (<i>see page 68</i>) |
| (4) True (<i>see page 73</i>) | (10) False (<i>see page 55</i>) |
| (5) False (<i>see page 27</i>) | (11) True (<i>see page 15</i>) |
| (6) True (<i>see page 12</i>) | (12) False (<i>see page 19</i>) |

featherbedding—



the economics of waste

**Nobody, but nobody, gains from the practice of
making work where there really is no work**

by Jules Backman

■ THE TERM featherbedding is used to describe payments for services that are not required or performed—that is, to cover the employment of men for whom there is really no work (e.g. firemen on railroad diesel engines). The effect is to have a company pay for work that is not necessary for the effective functioning of the business.

Featherbedding has emerged as a key issue in some collective bargaining negotiations in 1959. The railroads have announced a drive on featherbedding which is estimated to cost about \$500 million a year in that industry. It was an important issue in the steel strike.

Pittsburgh Plate Glass Co. had a 134-day strike over this issue.

As a nation we have placed major emphasis on economic growth. Featherbedding goes completely counter to the recognized desirable objective of increasing output per man-hour. Management and labor may argue over the contribution each has made toward greater productivity, but both agree that greater productivity is desirable and that rising living standards are impossible without it.

Productivity usually is measured by relating the number of man-hours paid for or worked to total output. The resulting figure is de-

scribed as output per man-hour. Any action which increases the number of hours required to obtain a designated output must yield a lower output per man-hour. The objective of featherbedding and make-work rules is to require the employment of more man-hours than are required to perform the work. To the extent that this objective is achieved, output per man-hour must be lowered.

The infectious evil of featherbedding is that in the interest of self-protection for a specific group of workers, policies are adopted which hold down or lower output per man-hour. Our rise in living standards reflects the continual substitution of inanimate for human energy. To those who advocate make-work rules or featherbedding, human energy is regarded as if it were the factor whose use should be maximized rather than replaced wherever possible so that man's talents can be otherwise employed. By blocking the free flow of labor into those areas in which its use could be maximized, featherbedding impairs and restrains the long-term rise in productivity upon which economic growth depends.

Principle of economic use

Featherbedding violates the principle of economical use of resources. While some may benefit from it in the short run, this benefit is at the expense of other

groups. In the process, the total product available to all of society is reduced on balance.

If our rate of economic growth is to be maximized, we must utilize our resources fully. This principle holds true for the individual, a company, an industry and a nation. When we violate it, we fail to increase the supply of goods and services as much as is possible within the existing state of technology. Make-work rules go counter to this principle because their adoption means that output per man-hour is held below the level obtainable.

Receptivity to change, it has been said, is an indigenous part of the American economic environment and has contributed significantly to our extraordinary rate of growth. However, change may hurt certain groups of workers, may impair the value of some types of capital, and may cause some communities to decline as others flourish. But without such change the result might well be stagnation. A prerequisite of growth is flexibility and mobility of both men and resources. Advances in techniques, with their initial effects of unemployment for workers displaced by these improvements, have always led to resistance to change.

Featherbedding and make-work practices often represent the response to possible loss of jobs attending new technology or new

methods of production. These practices then become frozen into the industry's structure and become a burden for many years in the future. For example, in the railroads most of the present make-work rules had their origin in conditions prevailing 40 or more years ago. These practices have no relationship to the facts of modern technology and hence they provide a drain on income and restrictions on service which limit the ability of railroads to compete with other means of transportation.

Important distinction

It is important to distinguish between the long-term and short-term effects of new technological developments. Over the long run the effect has been to create more jobs and higher living standards. The short-run cost is found in the direct impact on those workers who lose their jobs. In part, this is now cushioned by unemployment insurance. It has been proposed that companies adopt one or more of the following measures to ease the burden on the affected workers: provision of retraining for new jobs, preferential hiring (sometimes limited by seniority requirements), assistance in finding new jobs, severance pay, reduction in number of hours, freezing present jobs, or advance notice of impending changes. The usefulness of these palliatives must be carefully

evaluated within the framework of the position of each company or industry.

Who foots the bill for featherbedding? The answer is clear. Our economy is poorer as a result of make-work practices. It must be evident, even to the workers who are seemingly saved the costs of adjusting to economic change, that such costs must be met by someone. The employer will attempt to recoup the costs from his customers if he cannot reduce other costs. The consumer must ultimately meet much of the bill for featherbedding. Where demand is sufficiently strong, the user of the goods or service pays a higher price. The cost of unneeded labor means a price higher than would otherwise prevail. When demand is static or declining, featherbedding exacts its toll in the form of poorer service or inferior quality.

There is a second large group which directly or indirectly pays part of the bill for featherbedding—the workers themselves. The loss of work opportunities for the many, as a result of the preservation of jobs for the few, comes about in the following manner in the railroad industry. Higher rates often mean a loss of passenger or freight business to other competitive forms of transport. This is magnified further by the fact that the rapidity with which traffic can be moved by rail is impaired by

work rules which affect the rate at which railroad equipment can be used and the speed with which it is moved. The greater the drain upon the industry because of such practices, the less there remains for all other purposes, including labor compensation.

Featherbedding exacts its toll from still a third group, the stockholders, by denying to them some of the gains which they otherwise would obtain for their contribution of capital. And there can be little question that the primary factor behind the growth of productivity in American industry has been the large-scale flow of capital into those industries.

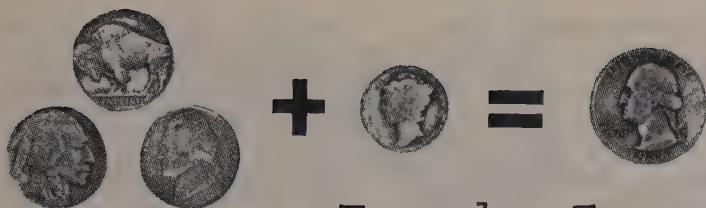
Last, but by no means least, is the impact of featherbedding upon the revenues of the various units of government. To federal, state and local governments, corporate earnings have been a tax base of great dimensions. As profits are reduced, the amount that can be tapped for local property tax purposes narrows, and the net income dwindles for income tax purposes.

Featherbedding in a sense constitutes a prior lien upon earnings even before they can be levied upon for some taxes. What might otherwise emerge as profit subject to taxation is partly siphoned off to meet the employment costs of workers who are no longer needed, or who are performing unnecessary functions. Dollars of profit

that might otherwise be used to reward or attract investors, or that might be taxed as profits and then again as income to the recipients, are instead paid out as wages and, are taxed at lower rates than prevail at the corporate level or among the stockholder-investor classes of income.

Economic growth requires a positive contribution in the form of greater output per man-hour, mobility of resources, wise use of all resources, new capital investment and technological advancement. Featherbedding adversely affects these developments. There is a substantial cost involved, and the "bill" is paid for by all segments of society, including the workers themselves.

The advantages of a competitive society are based upon the free flow of resources from those areas where they are no longer needed, or are needed less, to those areas where they can be employed more productively and more profitably. Featherbedding results in economic erosion because it impedes this flow of resources. The longer it takes labor leaders to sense these dangers, the greater the likelihood that government controls may be imposed to offset the lack of self-discipline. And such controls and regimentation will be as repugnant to labor as to management and incompatible with a maximum rate of economic growth. ■



Everyday Economics

■ **UNEMPLOYMENT INSURANCE** varies from state to state, making it advisable to check with the local agency after moving to a different state. In every state the unemployed person must register for work at a public employment office; generally, his job must be in private industry and with a firm that had at least four employees in 20 weeks of the year; he must have earned a certain number of wage credits and he must be able to work and ready to take a suitable job immediately if one is offered.

Retiring to the Riviera?



SOCIAL SECURITY retirement benefits may still be received if the beneficiary retires to a foreign country where living costs are lower. However, if, while abroad, the retired person takes a part-time job that is not subject to U.S. social security taxes, the regular \$1,200 a year earnings

test does not apply and he loses his benefit check for any month in which he works more than seven days. Most jobs open to Americans in the foreign offices of U.S. concerns *are* subject to U.S. social security taxes and the regular earnings test applies.

Draft worries?



A **YOUNG MAN** who expects to be called into the service has important things to do before leaving home. If he owns a car, he should check his insurance policy, arrange for premium payments while away and see that the title is in the name of the person who will use the vehicle. His taxes should be paid to date and arrangements made for filing income tax returns in his absence. Important documents should be stored in a safe deposit box and the right to open the box given to his wife, parent or attorney. If his family is covered by medical and hospitalization

insurance he may not wish to cancel the policy, but *he* may be entitled to a reduced premium. He may wish to authorize other persons to draw checks on his bank account and he should leave an address to which bank statements should be sent.

Sure to bounce



ALTHOUGH most people cannot detect a counterfeit or forged check,

chances of being duped will be reduced if they:

- Insist that the person presenting the check identify himself properly as the person entitled to that check.
- Make sure that, if the check may turn out to be forged, they will be able to find the forger and recover the loss.
- Insist that all checks be endorsed in their presence.
- Initial all checks, making a note of the kind of identification offered by the endorser.

Cooperative homeowner



A PERSON who owns stock in a cooperative apartment house has

the same tax rights as other homeowners. If he has paid in full for his stock, he may deduct his payments to the corporation for mortgage interest and real estate taxes.

To qualify as a cooperative the corporation must:

- Have only one class of stock outstanding (FHA stock is not acceptable).
- Give stockholders the right to occupy dwellings owned by the corporation.
- Derive 80 per cent of its gross income from payments made by its tenant-stockholders.
- Make distributions only from earnings and profits.

Guard against fire loss



EVEN a well-insured firm may be forced out of business if fire des-

troys the records necessary to reconstruct its pre-disaster financial position. Records used in obtaining loans, in the collection of accounts, patents, etc., which could not be replaced or could be replaced only at great inconvenience and cost should be stored in fire resistant files and *reproduced on microfilm*. The microfilm copies should then be stored in a separate building.

Another tune



THE Internal Revenue Service has reversed its policy of taxing all sales of manufacturers' rebuilt pianos. Now only pianos that have undergone major repairs will be taxable.—S. T.



The Communist Challenge to American Business. Clarence B. Randall. 203 pp. Boston: Atlantic, Little Brown. \$3.50.

•Of far greater scope than its uninspired title might suggest, this book is a wise and penetrating study of "America's role in affairs beyond her borders." As a former Chairman of the Board of Inland Steel and a foreign economic policy adviser to President Eisenhower, Randall believes that, whether we will it or not, the future of American free enterprise is thoroughly enmeshed with the future of every other free country in the world. For this reason, Randall is an enthusiastic advocate of free trade. He argues convincingly that no American industry can rely indefinitely on tariff protection against foreign imports and unlimited access to the raw materials of another country. As a sobering postscript, the author points out that all the raw materials for which the United States must depend on foreign sources are available within the confines of the Communist empire. But, concludes Randall, with an awareness by American business of its irrevocable ties to the economy of the world, and a willingness to coordinate American private enter-

prise overseas with the government's foreign economic policy, "we can win, and on our own terms."

* * *

Impatient Giant: Red China Today. Gerald Clark. 203 pp. New York: David McKay. \$4.50.

•One of the few Western journalists to visit Communist China, Canadian Gerald Clark's book holds some surprises for the Western reader: the Chinese people's acceptance of communism is wholehearted; most are glad to volunteer free time for work on backyard blast furnaces and on the construction of dams and industrial projects. Their efforts are paying off in greatly improved living standards and increased production. Clark sees no chance for a counter-revolution—heads are no longer rolling because "gentle persuasion" readily convinces the recalcitrant. The Western press has made much of each backward step made by the Chinese government, forgetting that for each step backward, three are taken ahead. Although production reports have been padded, Clark warns that they cannot be altogether discounted. Clark optimistically observes that, despite delays in five-year plans, production has increased

substantially. Asian pride in an Asian accomplishment can be felt throughout the East and even extends to Formosa where the younger generation points proudly to achievements on the mainland. Asians like to feel that most of the effort is their own. And a wise foreign aid program should not bear an indelible "made in U.S.A." stamp, but should be administered by the United Nations.

* * *

The Eavesdroppers. S. Dash, R. Knowlton, R. Schwartz. 441 pp. New Brunswick: Rutgers University Press. \$6.50.

•Wiretapping is forbidden by the Federal Communications Act, and the Supreme Court has ruled that state constitutional and statutory authorization of police wiretapping is invalid. However, some states continue to regard wiretap evidence as legally admissible—even though the police may be convicted under federal law for doing the wiretapping. This legal paradox demonstrates the strange mixture of fact and fancy which makes it difficult to present a true picture of the practice of eavesdropping. The coauthors of this book, a former prosecuting attorney, a law professor and a technical expert, have succeeded in separating most of the facts from the fancies and relating them to the question of civil liberties. The first section of the book discusses who the wiretappers are, how they operate and for whom they work. The second section is a technical explanation of the devices used in eavesdropping—what they can do and how they can be detected or foiled. The final section presents the legal aspects of wiretapping. This informative and

interesting book provides the facts most citizens want to know.

* * *

The Freudian Ethic. Richard LaPiere. 299 pp. New York: Duell, Sloan & Pearce. \$5.00.

•It is Dr. LaPiere's controversial thesis that the spread of Freudian ideas has contributed to the "subversion of American character." By stressing the need for removing sources of conflict, Freudians ignore the role that conflict has historically played in improving man's lot. The consequence of these ideas in education, business and other spheres of life has been to emphasize the need to change man's environment, rather than the responsibility of man to change his behavior. An important book.

* * *

•Readers who want to keep abreast of recent economic research should be interested in a new series of abstracts prepared by well-known professional economists and published by the Joint Council on Economic Education. Judging by the first two abstracts published to date—Prof. George W. Stocking's abstract of Dr. Simon Whitney's *Twentieth Century Fund study on Antitrust Policies: American experience in twenty industries* and Dr. Vernon H. Jensen's abstract of Dr. Clarence D. Long's study for the National Bureau of Economic Research on *The Labor Force Under Changing Income and Employment*—the series should prove indispensable for teachers, businessmen and others who want to keep up with recent research findings. The abstracts are clearly written and accurate. For copies write to Joint Council on Economic Education, 2 West 46 St., New York 36, N.Y. ■



Challenge Quiz

HOW WELL can you do with this true-false quiz? Test your ability to increase your knowledge through reading. Ten correct answers is Excellent; 9, Good; 8, Average. If you do the quiz *before* reading the articles, 6 correct answers is good. Answers on page 70.

- (1) In the U.S. we are now processing copper ore that contains only $\frac{1}{2}$ of one per cent copper.
True ☐ False ☐
- (2) The English penny was originally struck of sterling silver.
True ☐ False ☐
- (3) China participates directly in the Soviet bloc's Council of Economic Mutual Security.
True ☐ False ☐
- (4) In railroads, most of the present make-work rules had their origin in conditions prevailing 40 years ago.
True ☐ False ☐
- (5) Fifty thousand house trailers are produced annually in the United States.
True ☐ False ☐
- (6) The Mutual Security Act requires that our aid programs promote private enterprise.
True ☐ False ☐
- (7) The Mexican oil industry was nationalized in 1945.
True ☐ False ☐
- (8) Hourly wages in manufacturing increased by only eight per cent between 1923 and 1929.
True ☐ False ☐
- (9) Average daily rainfall in the entire United States produces over four trillion gallons a day.
True ☐ False ☐
- (10) Today, more than 70 per cent of American consumers have family incomes greater than \$5,000.
True ☐ False ☐
- (11) Residential mortgage debt is seven times greater today than it was in 1945.
True ☐ False ☐
- (12) Federal expenditures today contribute 50 per cent of total public expenditures in the U.S.
True ☐ False ☐



The Home Workman: A nut remover kit that contains the proper equipment for splitting rusted or frozen nuts without damaging the bolt or its threads. It can be used 100 times without regrounding the cutting blade . . . An indoor gas incinerator with a ceramic-lined flue that eliminates all smoke and odors. . . A chemical concrete cleaner that penetrates into the concrete to float out grease and oil so that they can be wiped away with a cloth. The cleaner will not harm paint, brick or woodwork. . . A home plumbing kit that contains 100 parts and an illustrated instruction book to enable the homeowner to make minor plumbing repairs.

* * *

Children's Corner: *For the pre-school child, a wooden toy school bus with removable wooden school children who joggle about as the bus is pulled. . . To bring back vacation memories, a Coney Island penny-bank machine made of plastic. The child inserts a penny and moves the controls to manipulate a scoop and catch one of the many tiny toy prizes. If he succeeds, the toy tumbles out through a chute. . . A jet fighter set that fires toy rockets (darts with rubber suction cup noses) at a metal target. The marksman lines up his shot through the sight, and blinking red lights on the control panel warn him if his rocket is off course.*

On the Job: A remote control keyboard for electronic adding machines permits the operator to use a machine in the office while he is working temporarily in a warehouse or shipping area. The keyboard is lightweight and has 10 keys. . . A Swiss-made wrist watch performs the simple operations of a slide rule when the outer rim is turned. It can also serve as a stop watch and is antimagnetic and shockproof. . . An impregnated paper towel designed to remove stains that come from handling carbon paper, typewriter ribbons and other office materials.

* * *

Sporting Life: *Liquid scent made from deer musk and animal glands that hides human odor and attracts deer. After saturating an absorbent pad, the hunter places it in an aluminum clip attached to his pocket hand warmer to bring out the scent . . . A camp stove that folds to fit easily into a pocket. One filling of any type gasoline will last for an hour and a half and there is no pump, generator or moving parts.*

* * *

Personal Business: A transistor radio built into the frame of sun glasses permits the wearer to listen to music at the ballpark or on the ski slope. . . Raincoats that resist water, oil and grease can be dry-cleaned repeatedly without affecting their ability to shed water.

* * *

For Photographers: A slide projector that permits the operator to show slides and, at the same time, privately preview the next box on an illuminated editing panel at the back of the projector.

* * *

Write to CHALLENGE magazine for additional information. ■